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OPPORTUNITIES AND REQUIREMENTS FOR INITIAL EMPLOYMENT OF SCHOOL
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THE NUMBER AND TYPES OF ENTRY JOBS AVAILABLE TO HIGH SCHOOL LEAVERS AND THE SKILLS DEMANDED BY THE EMPLOYER AS A PREREQUISITE FOR HIRING WERE STUDIED. DATA WERE COLLECTED FROM EMPLOYERS AND SCHOOL LEAVERS. ALL DATA WERE COLLECTED THROUGH THE USE OF PROFESSIONAL INTERVIEWERS. THESE DATA WILL PROVIDE SCHOOL PERSONNEL WITH THE BASIS FOR MAKING CURRICULUM CHANGES IN BUSINESS AND DISTRIBUTIVE EDUCATION SUBJECTS. THERE IS A DIRECT RELATIONSHIP BETWEEN THE SIZE OF THE COMPANY AND THE NUMBER OF ENTRY JOBS AVAILABLE FOR 16- TO 21-YEAR-OLDS WITH HIGH SCHOOL EDUCATION OR LESS. THE LARGER THE COMPANY, THE MORE LIKELY THEY ARE TO HAVE ENTRY-TYPE JOBS AVAILABLE. INNOVATIVE PROGRAMS ARE NEEDED TO NARROW THE BRIDGE BETWEEN WHAT EMPLOYERS WANT FROM 16- TO 21-YEAR-OLDS ENTERING THE LABOR MARKET AND WHAT THEY GET FROM SCHOOLS VOCATIONAL PROGRAMS. (JL)

OPPORTUNITIES AND REQUIREMENTS FOR INITIAL EMPLOYMENT OF SCHOOL LEAVERS WITH EMPHASIS ON OFFICE AND RETAIL JOBS

Cooperative Research Project No. 2378

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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Wayne State University
College of Education
Detroit, Michigan
1966

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PREFACE

This study evolved from a pilot project initiated by the Business Teacher's Club of Metropolitan Detroit and was funded by the Vocational Education Division of the Michigan Department of Public Instruction. Support for conducting this research was received from the Michigan Bell Telephone Company, the Greater Detroit Board of Commerce Education Committee, the Retail Merchants Association, the Administrative Management Society, McGregor Fund, and the Institute for Economic Education. Mr. Clyde Reed of the latter organization was especially helpful in the planning stage.

The proposal was developed cooperatively by the business education representatives of the Detroit Public Schools, the University of Michigan, and Wayne State University. In January, 1964, the United States Office of Education, Department of Health, Education, and Welfare, through the Cooperative Research Program funded the proposal as Project #2378. Wayne State University was designated as the fiscal agent.

At every stage, the USOE, and especially Dr. Bruce Blackstone and Dr. Robert Herman, have given invaluable assistance in bringing this study into fruition and encouraging the development of a curriculum demonstration project (USOE, No. OEG3-061968-1993).

Throughout the two-and-a-half years of the study, the Committee of Principal Advisers has given unstintingly of their time and has actively participated in all phases of the research project. The basic report was written by Drs. Fred S. Cook and Frank W. Lanham. The content was reviewed and approved by the Committee of Principal Advisers.

The following administrators were most helpful throughout the course of the study: Dr. S. M. Brownell, Superintendent of the Detroit Public Schools; Dean J. W. Menge, College of Education, Wayne State University, and Dean W. C. Olson, University of Michigan. Their help was beneficial in encouraging the initiation of the study and providing the climate in which the cooperative efforts of all three institutions could be utilized. Dean J. R. Hill, Graduate Division, Wayne State University, has served as a special consultant at every stage of the project and has made many significant contributions to its successful completion.

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SUMMARY

OPPORTUNITIES AND REQUIREMENTS FOR INITIAL EMPLOYMENT OF SCHOOL LEAVERS WITH EMPHASIS ON OFFICE AND RETAIL JOBS

Dr. Fred S. Cook
Dr. Frank W. Lanham

Wayne State University

Proposal No. 2378
January, 1964 to June, 1966

BACKGROUND

In Detroit, as in other metropolitan areas, many skilled occupations are being changed by automation and other technological developments. What is the effect of these changes on the number and types of entry jobs?[1] It has been assumed that shifting job requirements brought about by these changes have caused an imbalance between the needs of business and the current high school curriculums. Curricula innovations must be predicated upon data relative to current and anticipated entry job requirements.

Two major sources of data are available about entry jobs and the demands for these jobs: employers and high school leavers.[2] The current study focused on data to be collected concurrently from samples of both businesses and high school leavers within the political boundaries of Detroit. These data were used to develop a curriculum demonstration project[3] in office and retail areas for the Detroit Public Schools.

---

[1] The term "entry job" is defined as the first full-time job of a school leaver (aged 16-21 with a high school education or less) working a minimum of thirty-five hours per week and hired on a permanent basis with no previous full-time experience in a related field.

[2] High school leavers are defined as graduates and dropouts.

[3] Senior Intensified Program, U.S.O.E. Project 6-1968.

OBJECTIVES

The objectives focus primarily on entry jobs in office and retail occupations. Specifically, the purposes were to:

1. Determine the current labor market for high school leavers (aged 16-21) as reported by employers.
    a. What are the jobs available that can be filled by school leavers?
    b. Under what conditions would employers hire this age group for these jobs?
    c. What are the characteristics of entry jobs for office and retail occupations?
    d. What are the specific business skills demanded as a prerequisite for entry into office and retail jobs?
2. Determine what actually happened to school leavers as they sought to enter the labor market as reported by school leavers.
    a. What kinds of entry jobs were obtained by school leavers according to size, kind of business, and job classifications in business?
    b. What specific business skills were demanded as a prerequisite for entry jobs?
3. Determine relationship, if any, between data collected from both groups of respondents--employers and school leavers.
4. Develop a prototype for examining entry job opportunities and requirements that other metropolitan school districts could use.

PROCEDURES

To accomplish the aims of this study it was necessary to:

1. Determine the sampling procedures for the two universes: (a) employers and (b) school leavers.
2. Develop survey instruments to collect data from samples of the two universes.
3. Sort and classify the resultant data for various analyses.

The specific procedures for selecting the samples were:

A. Employers' Sample

1. A list of the 35,091 businesses in the City of Detroit was stratified by size (number of employees) and by type of business (Standard Industrial Classification groupings).

2. From these strata a disproportional stratified serial sample was drawn.

3. There were 683 companies chosen for inclusion in the sample.

B. School Leavers' Sample

1. The universe from which the sample was drawn included all of the June, 1963, graduates (7,422) from 21 Detroit Public High Schools and those who should have graduated in June, 1963 but dropped out of school in their senior year (330), a total of 7,752 persons.

2. The list of persons was stratified by graduate or dropout, school attended, and sex of the respondent.

3. A random proportional stratified sample was then drawn, providing a potential 969 cases.

4. This group was then divided into three parts.

The interview instruments were field tested and revised a number of times before interviewing began. All data were collected by professional interviewers. The business respondents were interviewed three times at six-month intervals starting in July, 1964. Each school leaver was interviewed once: the first group in July, 1964; the second group in January, 1965; and the third group in July, 1965. A panel of 572 companies responded to all three interviews; 422 school leavers interviews were completed in the three interview phases. Trained coders transferred the information into numerical form so that the analyses could be done on the Wayne State University's computers.

FINDINGS

The findings of the study are:

1. Four percent of all Detroit companies (100 or more employees) account for 55 percent of all office and retail jobs secured by 16 to 21 year olds. In all three phases of employer interviews, over 90 percent of the companies with over 500 employees had entry jobs available. Only 22 percent of the smallest companies, on the other hand, had entry jobs available. In other words, the odds are 1 out of 4 that employers of less than 25 employees will hire 16-21 year olds. The smaller the company, the more likely employers are to hire for other than office or retail jobs; the larger the company, the more likely they are to hire for office or retail jobs.

2. Thirty-eight percent of the 35,091 Detroit businesses stated they had entry jobs that could be filled by 16-21 year olds. A significantly lower percent of these same companies, 26 percent in July, 1965, indicated a disposition to hire this age group. However, only 19 percent did, in fact, hire during the six-month period preceding July 1, 1965. Furthermore, only 10 percent of all the Detroit companies hired 16-21 year olds for office or retail jobs.

3. Approximately two-thirds of all entry jobs filled in office and retail occupations were in two Standard Industrial Code Research Categories: 1) retail trade; and 2) finance, real estate, and insurance.

4. Fifty-four percent of all entry jobs were accounted for in clerical and sales _Dictionary of Occupational Titles_ classifications: 44 percent clerical and 10 percent sales.

5. In the fiscal year ended June, 1965, 36 percent of all entry jobs filled in Detroit were in unskilled (25 percent) and semiskilled (11 percent) occupations. This 36 percent was a significant increase over the average of the preceding two years (22 percent).

6. In the fiscal year ended June, 1965, 12 percent of all entry jobs were in service occupations. During the years of the study, service occupations averaged 15 percent of all 16-21 year olds hired.

7. An average of 19 percent of school leavers of 1963 had not held full-time jobs. Furthermore, 5 percent of the class had not experienced even a part-time job. Fifty-five percent of all school leavers had obtained a full-time job within six months after graduation.

8. More 16-21 year olds lost their jobs for incompetence and inability to do the job than for any other reason. Inability to get along with people accounted for one-third of the reasons for dismissal.

9. Of 43 "co-op" students in the sample, 95 percent had had an entry job compared to 79 percent of the other school leavers. The difference was significant above the .02 level. However, of the current full-time jobs held at the time of interview, there was not a significant difference at the .05 level as between "co-ops" and the rest of the school leaver sample.[1]

---

[1] The current co-op enrollment in office and Distributive Education while seemingly large (2,300 office) comprises less than 23 percent of the current graduating class; thus it makes less impact than it could because it is not known by many companies. Approximately 600 employers use office co-ops in Detroit out of the potential 35,000 companies in the universe of the study.

10. "Co-op" work study, sex, race, and the combined factors of sex and race, were significant influences on whether a school leaver had held an entry job. "Co-op" was the most positive factor in determining whether a school leaver secured a job. Being a female Negro was the most negative factor in determining that a school leaver did not secure a job.

11. School leavers' intelligence ratings play an important role in determining the type of occupation in which they will find their entry job. Fifty-four percent of the high-intelligence group entered clerical occupations. However, only 17 percent of the low-intelligence group entered this occupational area. In the retail occupations the situation is reversed: Only 5 percent of the high-intelligence group went into retail occupations, while 17 percent of the low group did so.

12. According to the total employer responses, schools and "co-op" work or other work experience programs ranked seventh and eighth of nine ranks as sources of recruiting 16-21 year olds. Of eight sources used by school leavers in seeking a job, school ranked fifth among all sources used. Yet, in actually helping 16-21 year olds obtain a job, school ranked second only to the personnel office. In students' current job, "co-op" work and schools ranked 6 and 7.5 respectively out of eight ranks.

13. Fifty-five percent of school leavers employed in clerical occupations reported taking one or more tests; 22 percent of those in retail occupations so reported.

14. Aptitude tests, including intelligence, accounted for 50 percent of all tests reported by school leavers in obtaining their jobs. Another 33 percent were classified as general achievement tests with more than half of these reported as arithmetic tests. Of those companies seeking

clerical employees, 37 percent reported giving a typewriting test. None of the school leavers, and only 3 percent of the businesses, reported taking or using a sales test.

15. Twenty-six percent of the smallest companies reported using tests; 45 percent, 51 percent, and 56 percent of the three middle-size companies so reported; 95 percent of the largest companies reported using tests.

16. In companies of more than 100 employees, the application blank ranked first; with the interview, formal or informal, ranked second of 12 screening devices. Among the small companies (1-3 employees) informal interview and references from previous employees ranked first and second. School sources of information were relatively unimportant, accounting for the lowest rank of 12 screening devices.

17. General office clerks accounted for 22 percent of all office and retail entry jobs filled; typists, 17 percent; sales clerks and sales clerks in dry cleaning and laundry, 8 percent; sales persons, salesmen to consumers, salesmen and sales agents (except to consumers) and shoppers, 8 percent.

In ratio of skills required to jobs available, secretaries and stenographers ranked first with 1.96 skills demanded per job; typists, 1.1; canvassers and solicitors, 1.0; general office clerks, 0.99.

18. Forty-four percent of all office and retail jobs demanded the skill of typewriting. Of all jobs demanding one or more skills, 85 percent demanded typewriting. Typewriting ranked first as the most frequently required skill in 13 office and retail occupations; second,

in 8; and third, in 1. Only two entry job classifications in office and retailing did not have typewriting demanded of some workers.

CONCLUSIONS

In summary form, the following statements stand out as the major conclusions of the study:

1. There is a high rate of unemployment in the 16-21 year age group.

2. Job turnover among school leavers is relatively high with more than two-fifths reporting holding more than one full-time job.

3. Nine out of ten Detroit businesses do not employ school leavers for entry office and retail jobs.

4. Few business "skills," as the term is used in this study, are demanded as a prerequisite for employment in office and retail jobs.

5. The schools are not considered as an important source for recruiting and screening 16-21 year olds.

6. Typewriting was the one single business skill most often required in an entry office and retail job.

7. Above average aptitudes as represented by intelligence tests are possessed by a high proportion of those entering the clerical field.

8. Sex and race were the most significant influences in Negro females not obtaining an entry job.

9. Both sex and race are significant influences in the type of entry job obtained by school leavers.

10. Retail selling jobs demand few skills.

11. "Co-op" work experience was a positive influence for entrance into full-time employment.

CHAPTER I

SCOPE OF STUDY

Introduction

In Detroit, as in other metropolitan areas, many skilled worker occupations are being changed by automation and other technological developments. What is the effect of these changes on the number and types of entry jobs?[1] Some evidence indicates that youth who have not developed their skills constitute a major portion of the "hard core" of unemployed. The Bureau of Labor Statistics estimated that in 1962 young persons, aged 16-21, accounted for 18 percent of the unemployed although they comprised only 7 percent of the labor force.[2] Consequently, questions are raised about the development of special skills to meet the changing job opportunities for high school leavers.[3]

Most of the studies to date concerning high school leavers have dealt with the exceptional student. Little research has been done concerning the needs of students preparing for office and retail occupations. Yet, this latter segment of the total high school curriculum accounts for approximately one-third of the total high school enrollment. In fact, there are more students enrolled in office and retail curriculums than any other in the Detroit public high schools with the exception of English.[4] Detroit's pattern is true nation wide. Furthermore, the office and retail curriculums are among the few curriculums that provide opportunities for high school students to secure entry jobs in occupations requiring special training. It is appropriate, therefore, to determine what specific skills are required for high school leavers to enter this job market--a job market that is changed and changing.

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[1] The term "entry job" is defined as the first full-time job of a school leaver (age 16-21 with a high school education or less) working a minimum of 35 hours per week and hired on a permanent basis with no previous full-time experience in a related field.

[2] Occupational Outlook Quarterly, United States Department of Labor, Bureau of Labor Statistics, 8 (May 1964), 19.

[3] The term "school leavers" is defined as graduates and dropouts. This term was also used with a similar meaning by the Michigan Employment Security Commission in a 1964 report titled Detroit High School Leaver Project.

The Research Committee of the Business Teacher's Club of Metropolitan Detroit[5] became concerned with the need for factual data about entry occupations. In consequence a feasibility study entitled Detroit Study of the Effectiveness of High School Education for Entrance into the World of Work was developed and funded in 1962 by the Michigan Department of Education.

From the findings of the pilot study, the need for a more comprehensive study of entry jobs in office and retail occupations became even more apparent. The City of Detroit was selected with the belief that such a study could serve as a prototype for similar studies in other large metropolitan areas.

The proposal for the current study was prepared and submitted for funding in 1963 by the Detroit Public Schools, The University of Michigan, and Wayne State University to the U. S. Office of Education. The proposal was approved and funded for a period of two years beginning in 1964.[6] Wayne State University served as fiscal agent. The project was started in January, 1964, under the supervision of a project director assisted by a Committee of Principal Advisers.[7]

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[4] "...of the non-academic subjects, business education was the most popular with approximately 81 percent of all pupils (92 percent of the girls and 69 percent of the boys) completing some credits in this area and more than 18 percent completing over three credits." (USOE Bulletin E 33025, November 10, 1962, entitled What High School Pupils Study.)

[5] Composed of representatives from Wayne State University, The University of Michigan, and the Detroit Public Schools.

The Problem

Shifting job requirements brought about by technological changes have caused an imbalance between the needs of business and the current high school curriculums. High school curriculums must be modified to compensate for this imbalance. However, statistically reliable information, upon which to recommend revision of office and retail curriculums for the preparation of work-bound youth, was previously lacking. Information on both the changing entry jobs and their requirements was needed.

Two major sources of data are available about entry jobs and the demands for these jobs: employers and high school leavers. In a metropolitan area with approximately 35 thousand businesses and 8 thousand students graduating from public high schools, data collection presents staggering problems. Previous data collections in smaller communities about entry jobs in businesses and school leavers have been made.

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[6] United. States Office of Education Project No. 2378

[7] Members of the Committee of Principal Advisers were Leslie J. Whale, George Kargilis, Ann Lind, and Jeanne Reed, Detroit Public Schools; Frank Lanham, University of Michigan; and Daniel P. Brown, Christine Michaels, and Fred S. Cook, (Project Director) Wayne State University.

However, no systematic attempt has been made to sample simultaneously both universes in a metropolitan area (business and school leavers) to determine the changing entry job patterns.

In consequence, the current project focused on data to be collected concurrently from samples of both businesses and high school leavers. A concomitant objective was the development of procedures that would provide statistically reliable data concerning the entry occupations obtained by high school leavers.

Objectives

The shifting requirements for employment in business and industry need to be known to make concurrent changes in high school occupational preparation. It seems reasonable to believe that preparatory courses leading to occupational competence should be made in terms of current entry job requirements rather than be based on the more general job description categories that describe requirements appropriate for all working in an area.

The focus on the entry job requirements makes the current study unique in these ways: (1) Previous studies have not reported the specific entry jobs available in a given community, and (2) Previous studies have not reported the specific skills or conditions of employment demanded by employers for those jobs available to high school youth with no previous full-time employment. The current study attempts to overcome these two deficiencies.

Again, previous surveys have been "short term" projects that have not explored continuing changes in the labor market. The current study examines the opportunities and requirements through a series of three consecutive interviews which provided data concerning entry jobs for a period of three and one-half years from employers and for two years from school leavers. The original interest of the study was to collect data at six-month intervals over a period of five years as the basis for developing an entry job index. Funds were insufficient to meet this latter objective. However, the data collected do provide clues for later development of a barometer that can be used by curriculum builders to initiate change in job preparatory programs. The development of such a barometer becomes even more crucial with the increasing rate of change in business and the consequent need for greater flexibility in changing schools' vocational curriculum.

Despite the lack of funds necessary to develop an entry job index, the objectives of the current study take into account the limitations of previous research. The objectives focus primarily on entry jobs in office and retail occupations. Specifically the purposes were to:

1. Determine the current labor market for high school leavers (aged 16-21) as reported by employers.
    a. What are the jobs available that can be filled by school leavers?
    b. Under what conditions would employers hire this age group for these jobs?
    c. What are the characteristics of entry jobs for office and retail occupations?
    d. What are the specific business skills demanded as a prerequisite for entry into office and retail jobs?
2. Determine what actually happened to a sample of school leavers as they sought to enter the labor market.
    a. What kinds of entry jobs were obtained by school leavers according to size, kind of business, and job classifications in business?

b. What specific business skills were demanded as a prerequisite for entry jobs?

3. Determine relationship, if any, between data collected from both groups of respondents--employers and school leavers.

4. Develop a prototype for examining entry job opportunities and requirements that other metropolitan school districts could use.

To achieve the foregoing, the following were the specific questions used in developing the interview schedules (Appendices B and C):

1. How many actual and anticipated entry jobs were available during interview period encompassed by the study?

2. How many entry jobs are available today, i.e., first interview interval (July, 1964)? How many will be available one year later (July, 1965)? eighteen months later (January, 1966)?

3. What specific abilities and knowledges are demanded by employers for entry clerical and sales jobs?

4. What types of entry jobs were secured by high school leavers?

5. What types of entry jobs were secured by high school graduates who had completed a college preparatory program but who had not graduated from college? those who entered college? those who did not enter college?

6. What are the implications of the data for changes in the high school preparatory curriculums in office and retail jobs?

7. What indications of changing entry jobs do the data provide?

Limitations and Assumptions

1. Because of time and budget, the study was limited to the political boundaries of the City of Detroit.

2. Data were collected relative to the total number and type of entry jobs. However, questions concerning specific skill demands were restricted to the office and retail occupations.

3. To the extent that other urban centers are identical to Detroit, the techniques and procedures utilized in this study will be applicable.

4. In the sample design employed, companies in Detroit were stratified on the basis of factors of size (number of employees) and type of

business (the activity in which the business engaged). The basic assumption associated with such an approach is that the strata are homogeneous "within strata" and heterogeneous "between strata" with respect to the variables being studied. The rationale used here is that an insurance company of 20 workers would have approximately the same *number* and *types of entry jobs* as other insurance companies employing approximately 20 workers, but would differ in *numbers* and *types of entry jobs* from a large manufacturing concern employing more than 500 employees.

5. It is assumed that the questionnaires employed in the study are of sufficient validity and reliability for the purposes of the study. In the development of the questionnaires, the instruments were revised, field tested, and reviewed by three panels of consultants. The school leavers' questionnaire was revised seven times and the employers' questionnaire, eleven times.

6. Whenever one asks another person a question there is a basic assumption that the answer is true; that is, an "expressed" opinion is a "felt" opinion of the respondent. In order to optimize the probability of this assumption being true, all respondents were assured that their responses would remain confidential. The interviewers involved were also trained to refrain from any response which might tend to suggest a "correct" answer. Under these conditions the assumption of an "expressed" opinion is a "felt" opinion was considered reasonable.

7. It was assumed that repeated interviewing of employers would not significantly change their views and attitudes. Under the conditions of sampling and data collection employed in the current study, the stated assumption was considered to be valid.

8. In the drawing of the employers' sample, it was necessary to assume that all business establishments would have a telephone. While this may not be true, those businesses without a telephone were assumed to be of such small size that the data contributed by these establishments would not influence the results.

9. The assumption that businesses distribute themselves randomly in size categories was necessary since businesses included in this study were grouped according to the factor of size.

Summary

What are the opportunities and requirements for entry jobs in office and retail occupations in Detroit? What are the implications of such data to those responsible for administering the business education program in the Detroit Public Schools? These two basic questions served as the focus for developing and conducting the present study.

The design of the study and methods of analyses are described in Chapter II. The major findings are discussed in Chapter III. In Chapter IV each finding is discussed and is accompanied by conclusions and recommendations.

Chapter II

STUDY DESIGN

Type of Data

To meet the objectives described in Chapter I, data required included: (1) The number of entry jobs, (2) the types of entry jobs, (3) specific skills demanded for these jobs, (4) types of entry jobs secured by school leavers, (5) types of jobs secured by college preparatory school leavers, (6) manner in which school leavers secured their jobs, (7) types of tests administered to prospective employees. These are data that have implications for change in the high school curriculum. Although data were collected about all entry occupations, the primary focus, as described in Chapter I, was on office and retail occupations.

In order to secure data to determine the above it was necessary to:

1. Secure a list of each of the universes of employers and school leavers.
2. Determine the sampling procedures for each universe.
3. Develop survey instruments (Appendices B and C) to collect data from samples of the two universes: (a) employers and (b) school leavers.
4. Sort and classify the resultant data for various analyses.

Procedures used and their rationale, details involved in the selecting of the respondents, and methods for collection of data are discussed in the remainder of this chapter.

Sources of Data

For purposes of this study, the collection of data was confined to:

a. Employers located within the political boundaries of the City of Detroit, and

b. School leavers of June, 1963, from 21 Detroit Public High Schools.

Definition of Employers' Sample

The universe from which the sample of employers was drawn was from a list of 35,091 businesses within the City of Detroit. In cases where a business had multiple installations (local, state, or national), personnel at the main installation in the Detroit Standard Metropolitan Survey Area[1] were interviewed. Data obtained from these multiple-installation companies dealt with those located in Detroit.

Definition of School Leavers' Sample

The universe from which the sample of school leavers was drawn included all of the June, 1963, graduates (7,422 in number) from 21 Detroit Public Senior High Schools, and those who should have graduated in June, 1963, but who dropped out of school in their senior year (330 in number). The total number of 7,752 persons is defined as "school leavers" throughout this report.

Students who should have graduated in June, 1963, but dropped out of school prior to the senior year were not included. Dropouts prior to the twelfth grade were assumed to be different from our universe and thus to require special study. They were excluded from the current study, however, because of time and financial limitations. Specifically, single or multiple listing(s) of these dropouts were unavailable.

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[1] The Detroit Standard Metropolitan Survey Area (DSMSA) is composed of Wayne, Oakland and Macomb counties.

Sampling

To fulfill the aims of the study, statistically valid samples for both employers and school leavers were needed. Simple random sampling was not appropriate because the two universes consisted of a number of distinct elements, and members of each element needed to be included in sample selections. The sampling procedures utilized in this study are described in the following sections.

Employer Sample

Criteria for the selection of a comprehensive list of the employer universe were these:

1. The list had to be inclusive (i.e., include all businesses within the political boundaries of Detroit).
2. The list could not contain businesses located outside the city.
3. The list had to indicate size of business (i.e., number of employees).
4. The list had to indicate type of business (i.e., the product or service of the company).

Lists of Detroit businesses obtained from the Tax Assessor's Office were rejected as not meeting the criteria because:

1. One list enumerated only the owners, managers, or other entity that paid the real property taxes, and excluded those companies that rented space.
2. The second listing enumerated all businesses with property over $500. It did not contain, however, any type and size data, and furthermore was out of date for study purposes.

Attempts were made to obtain lists that met the criteria established from (1) Detroit's Community Renewal Program, (2) Detroit City Planning Commission, (3) Directory of Michigan Manufacturers, (4) Dun and Bradstreet, and (5) Michigan Employment Security Commission. No one source or combination of sources was adequate for drawing the necessary sample.

After a five-month search, the Michigan Bell Telephone Company was contacted because the Detroit Yellow Pages was judged closer to meeting our criteria. It was more inclusive than any other source because it contained a listing of nonprofit organizations such as hospitals, churches, schools, and units of government as well as all businesses having a telephone. To use such a list, however, required the assumption, previously indicated, that each part of the universe we sought to sample would have a telephone.

The Michigan Bell Telephone Company was willing to cooperate. Furthermore, instead of using their "Yellow Pages Directory," each Detroit company listed was recorded on punched cards according to the type of business. Three problems were involved in the use of this source; (1) duplicate listings, i.e., a department store might be listed under several headings, (2) absence of information on size of company by number of employees, and (3) the manner of classifying businesses. The first two problems were solved at the time of the selection of the final sample, as will be shown in this report. The following describes the solution to the third problem.

Businesses were classified by the telephone company according to Universal Classification of Business types (UCB) instead of Standard Industrial Classification categories (SIC). The Standard Industrial Classification was designed to agree with the classification used by most departments of the Federal Government.

The Universal Classification of Business is a detailed list indicating type of business based upon Standard Industrial Classification codes which were developed for specific use by the telephone company. The UCB codes consisted of 361 major three-digit categories. In translating from UCB to SIC codes, it became necessary to arbitrarily combine and rearrange the nine major SIC classifications into eight special research classifications (Table 1).

The manner in which the SIC codes were grouped into the eight research categories is shown in Appendix D. The results of matching UCB codes with the defined SIC research categories are shown in the table below.

TABLE 1

Number of UCB Codes Allotted to SIC Research Categories

	Project's SIC Categories	Number of UCB Codes
I.	Construction and Manufacturing, Durable	52
II.	Manufacturing, Nondurable	38
III.	Warehouse and Wholesale Trade	92
IV.	Retail Trade	96
V.	Finance, Insurance, and Real Estate	6
VI.	Business and Personal Services	53
VII.	Nonprofit	8
VIII.	Entertainment and Professional Services	16
	Total	361

Thus, the list of employers was obtained from Michigan Bell Telephone Company, and this list was reclassified by type of business to provide the universe from which the master sample was drawn.

One additional point should be noted before moving to the discussion of the master sample: The study committee had access to a list of companies (131 in number) employing over 500 employees. Since this list consisted of only 131 companies, rather than sampling, the entire list was used. These companies were treated as separate self-representing stratum. The following procedure for selecting a master sample was not applied to this group.

Selection of the Employer Master Sample. The sample within a given stratum was drawn by means of systematic selection (with a random start). In this method (the stratum elements were alphabetized), every "nth" element was drawn after a starting point had been selected at random. The interval employed in this study was each twentieth element. Using a random start of the eighth card in a given group, every twentieth card thereafter was selected and printed until the stratum was exhausted. Although serial selection with a random start is a form of restricted random selection, its use in sampling is widespread and in most cases provides an adequate, representative sample of a universe.[2]

From this master sample all businesses located out of the geographical limits of Detroit were deleted. A return postal card was sent to the remaining businesses in the master sample in order to obtain information concerning the number of employees in the business. The companies that did not respond to the postal survey were contacted by telephone. During this phase information was gained that deleted from the sample other companies, e.g., some companies had gone out of existence.

The results of a preliminary investigation indicated that 1,472 businesses were eligible for inclusion in the master sample according to results obtained, as shown in Table 2.

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[2] Morris H. Hansen, *et al.*, *Sample Survey Methods and Theory* (New York: John Wiley and Sons, Inc., 1953), pp. 504-505.

TABLE 2

Overall Results of Master Sample

Distribution	Number	Percent
Businesses with Type and Size Data	1,427	54
Businesses with Size Data Only	45	2
No Response: Business Located	152	6
No Response: Business Not Located	311	12
Government Organizations	68	3
Outside Survey Boundaries	511	19
Out of Business or Proprietor Deceased	30	1
Other: Multiple Listings, Computer Repeats, Duplicate Listings	83	3
Not Ascertained	4	0
Total	2,631	100

Approximately 18 percent of the businesses did not respond to the postal survey. The sample group, however, was limited to those businesses that fell within the survey boundaries regardless of their cooperation in the initial investigation. The final sample was drawn from 1,783 companies: 1,472 companies who responded to the query on size and 311 who did not respond because they were not located by the survey. Therefore, the 152 firms that refused to respond introduced a "noninterview" bias of approximately 6 percent into the results of the sampling. Since these companies had refused to cooperate initially, it was thought that they would not be cooperative in the interview phases. This noninterview bias should be noted in reviewing the data later presented in this report.

Selection of the Employer Final Sample. The final stage in selecting the employers' sample involved the application of a stratified sample design which gave disproportional representation to the various size strata. Within each size category, the cases were clustered by type of business in order to assure an efficient representation of that factor in the final sample. Approximately the same number of cases for each "size" category was selected. This selection was based on the assumption that each size group constituted theoretically discrete and different entities.

The study included a longitudinal dimension, which required a minimum of 500 interviews in three interview phases. Thus, to insure the minimum, an estimate of oversampling was made. The estimates as discussed below proved to be high resulting in 572 completed interviews.

The use of the stratified disproportionate sample permitted (1) the comparison of results between strata (since each stratum provided an independent sample) and (2) estimates of values of total universe parameters.

Subsampling from the master sample was limited to the stratum of businesses under 25 employees. Subsampling was unnecessary in all the other strata, because of a limited number of companies remaining in these strata after the master sample selections. Working assumptions, based upon the pilot study estimates, were made concerning the maximum number of companies needed in each "size" category to cover adequately noninterviews and business mortality losses. For example, based upon pilot study data, it was assumed that companies employing 1 to 3 employees would have a noninterview rate of 20 percent plus a 20 percent mortality rate; companies of 4 to 24 employees would also have a 20 percent noninterview rate plus a 5 percent mortality rate. From these assumptions a final sampling ratio of 1 to 5 for the master sample was derived for companies employing 1 to 3 employees, and a ratio of 1 to 3 for companies employing 4 to 24 employees.

Because of the uncertainty of the assumption concerning noninterviews and mortality rate plus possible cost limitations, a group of the smaller companies was held in reserve in case an adequate number of completed interviews were not realized. It was understood that any selection made from the reserve would be completed on the basis of a randomizing method, i.e., random numbers. The reserve could be used in only the first interview phase. For companies of less than 4 employees, 44 percent of the reserve was actually used; for companies of 4 to 24 employees, the total reserve was used.

Table 3 shows the steps employed in sample selection. Table 4 shows the number of sample selections for each stratum and the number of companies in the universe represented by these selections.

TABLE 3

Overview of Sampling Procedures (Includes Master Sample, Final Sample, and Universe)

Size of Company by Number of Employees	Sample Ratio For Master Sample From Population (1)	Number in Master Sample After Deletions (2)	Sample Ratio for Final Sample From Master Sample (3)	Number in Final Sample Including Reserve (4)	Sample Ratio for Reserve Allowance (5)	Number in Reserve Allowance (6)	Number in Final Sample Not in Reserve (7)	Number Used From Reserve (8)	Number of Final Sample Selections Used (9)	Final Sample Ratio to Population (10)	Estimate of Population From Master Sample (11)	Estimate of Population From Final Sample (12)
1- 3	1:20	1,078[1]	1:5	215	1:3	72	143	31	174	1:120	21,560	20,880
4- 24	1:20	488	1:3	163	1:4	41	122	41	163	1:060	9,760	9,780
25- 99	1:20	145	1:1	145	None	Inap[2]	145	Inap	145[3]	1:020	2,900	2,900
100-499	1:20	72	1:1	72	None	Inap	72	Inap	72	1:020	1,440	1,440
500 +	1:01	131	1:1	131	None	Inap	131	Inap	131	1:001	131	131
Totals	--	--	--	--	--	--	--	--	--	--	35,791	35,131

[1] Includes 767 companies with size information of 1-3 and 311 with no size information assumed to be 1-3 employees.

[2] Inap--Indicates that the column entry is inapplicable for that row since a reserve allowance was not made.

[3] Only 143 were actually sent to field for two companies were determined to be out of the universe between the time of drawing of the first sample and the start of the fieldwork.

TABLE 4

Representation of Universe by Sample Selection According to Size and Type of Business

Size of Company By Number of Employees	TYPE OF BUSINESSES							
	Construction and Manufacturing, Durable	Manufacturing Nondurable	Warehouse and Wholesale Trade	Retail Trade	Finance, Insurance, and Real Estate	Business and Personal Services	Non-profit	Entertainment and Professional Services	Total
1 - 3	5 (600)	4 (480)	14 (1,680)	37 (4,440)	17 (2,040)	52 (6,240)	7 (840)	38 (4,560)	174 (20,880)
4 - 24	18 (1,080)	9 (540)	22 (1,320)	30 (1,800)	14 (840)	43 (2,580)	12 (720)	15 (900)	163 (9,760)
25 - 99	21 (420)	10 (200)	25 (500)	24 (480)	13 (260)	37 (740)	6 (120)	7 (140)	143 (2,860)
100 - 499	16 (320)	4 (80)	7 (140)	14 (280)	7 (140)	16 (320)	2 (40)	6 (120)	72 (1,440)
500 +	57 (57)	28 (28)	1 (1)	14 (14)	9 (9)	9 (9)	8 (8)	5 (5)	131 (131)
TOTAL	117 (2,474)	55 (1,328)	69 (3,641)	119 (7,041)	60 (3,289)	157 (9,889)	35 (1,728)	71 (5,725)	683 (35,091)[1]

PLEASE NOTE: Upper number in table shows number of companies in sample, lower number shows number of companies represented in universe.

[1] Total is less by 40 than in Table 3 because two size C companies were not sent to field.

Number of Final Sample Interviews. Before discussion of the results of interviewing, it should be noted that the employers were first interviewed in July, 1964. Respondents who completed interview in July, 1964 were reinterviewed in January, 1965, and again in July, 1965, provided their company still met the definition of the employers' universe. This procedure provided a "panel of respondents" from which longitudinal data are available. The results of the three interview phases are reported in Table 5.

A total of 683 employer respondents were selected as a result of the sampling procedures. A total of 604 interviews were completed in July, 1964; 591 in January, 1965; and, 572 in July, 1965 (Table 5).

TABLE 5

Distribution of Completed Interviews

Size of Company by Number of Employees	Total Companies In Sample	Total Number of Completed Interviews by Interview Phase		
		Phase 1 July 1964	Phase 2 January 1965	Phase 3 July 1965
1- 3	174	148	143	138
4- 24	163	146	141	133
25- 99	143	134	131	129
100-499	72	67	67	65
500 +	131	109	109	107
Total	683	604	591	572

Note that for a panel study, the number of interviews lost (i.e., noninterviews) represented 2 percent in Phase 2 over Phase 1 and 3 percent in Phase 3 over Phase 2. The total loss of 32 interviews from the first to third phases amounts to 5 percent.

Estimation of Sampling Error. Longitudinal data covering 572 companies are available. Data covering only part of the time period under study are on record for the remaining 32 companies. The data produced by the 572 interviews are sufficient for analysis and the estimating of the values of universe parameters within an acceptable range of error for a stipulated confidencc interval, i.e., 95 percent. The sampling error range at the 95 percent level within the various strata and the entire universe are listed below. The acceptable rate of errors is listed (Table 6) for comparison within strata and for the entire universe parameters.

TABLE 6

Range of Sampling Errors

Size of Company by Number of Employees	Error (In Percents)
1- 3	± 8.34
4- 24	± 8.49
25- 99	± 8.62
100-499	±12.15
500 +	± 9.47
Total Universe	± 5.59

These figures are based on an evenly divided dichotomous universe. For a discussion of the method utilized along with the applied formulas, see Appendix E. Error ranges determined from the sample mean that if half of the population had an attribute, the line value for the universe would be from 44.41 to 55.59 percent having the attribute in 95 percent of all cases.

School Leavers' Sample

The school leavers' sample design was also stratified. However, unlike the design of the employers' universe, the school leavers' sample design was proportional within the strata. The items upon which stratification of the school leavers' universe was based were: (1) graduate or twelfth-grade dropout, (2) school attended, and (3) sex.

The universe from which the sample was drawn consisted of 7,752 school leavers as follows:

1. From 21 senior high schools in Detroit, 7,422 graduates of June, 1963.
2. From those who left school during the senior year, 330 who should have graduated in June, 1963.

The universe was further limited to include only:

1. School leavers who lived in and worked in Detroit.
2. School leavers who lived in Detroit but were unemployed and actively seeking employment.

These limitations excluded a total of 456 as follows:

1. School leavers who were living outside Detroit, e.g., school attendance, military service, 230 in number.
2. School leavers who lived in Detroit but who were employed outside its political boundaries, 136 in number.
3. School leavers who lived in Detroit but were unemployed and not seeking employment, 90 in number.

The study was concerned with employment opportunities and requirements for school leavers within the political boundaries of Detroit. This geographic limitation placed on both school leavers and employers provided parallel data for comparative purposes.

Selection of the School Leaver Master Sample. A listing of all persons who graduated in June, 1963, was supplied by the Detroit Board of Education. A listing of all dropouts, however, was not available. Each of the 21 Detroit public high schools was visited to compile this listing. The mechanical process of identifying graduates of the sample was performed in the Board of Education offices. The procedures employed for selecting both graduates and dropouts for the sample were identical, although they were drawn independently. The master sample thus drawn consisted of 929 graduates and 40 dropouts for a total of 969 school leavers.

Selection of the School Leaver Final Sample. The final sample was divided into three approximately equal parts by a systematic random procedure as follows:

Sample	Number of Respondents	Interview Phase
A	322	July, 1964
B	325	January, 1965
C	322	July, 1965

Number of Final Sample Interview. The master sample of 969 school leavers (929 graduates and 40 dropouts) was divided into three groups and each group was interviewed during one of the three interview periods, as noted above. Those persons who were unemployed and seeking employment at the time of their first interview were reinterviewed in the second phase but, because of placing the emphasis on the entry job, the second interviews from these unemployed were not included in the basic data.

The results from the three interview phases are shown in Tables 7 and 8. In Table 7, the master sample is divided according to true sample, i.e., those who met the criteria of living and working in Detroit or who were looking for full-time employment. In Table 8, the true sample is divided according to interviews completed and to noninterviews and their reasons.

TABLE 7

Number of True Sample to Be Interviewed

Type	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
True Sample	188	58	164	51	161	50	513	53
Nonsample	134	42	161	49	161	50	456	47
Total[1]	322	100	325	100	322	100	969	100

[1] The three samples were not equal in size (n) because of errors considered to have an insignificant effect other than producing minor different sample sizes for each sample.

Note that although a master sample of 969 cases was drawn (see the row labeled "True Sample" under the column headed "Total"), 513 cases in number, or 53 percent, met the requirements of membership in the universe. This large **reduction** from the master sample to the true sample was not unforeseen. An estimate was made previous to the drawing of the sample that 40 percent of the members selected for the master sample would be excluded from the true sample because of not fitting the necessary criteria. As one can see from Table 7, this estimate was too conservative, for exclusions were at a rate of 47 percent. This underestimation of loss is not serious, for the number of completed interviews, shown in Table 8, is sufficient to provide reliable results, as will be explained later.

TABLE 8

True Sample According to Interview Completions

Sample	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Completed Interviews	160	85	138	84	124	77	422	82
Noninterviews Refusals	4	2	5	3	1	1	10	2
Unable to Locate	18	10	14	9	26	16	58	11
Unable to Contact	6	3	7	4	10	6	23	5
Total	188	100	164	100	161	100	513	100

Although the nonresponse rate for the entire three interview phases was 18 percent, 11 percent was composed of school leavers that were not located despite numerous attempts on the part of the research team. Although these 58 persons were considered as "noninterview," it can be assumed at least 47 percent of them are really "nonsample" for the reasons indicated in Table 7.

Table 9 shows the whereabouts of the school leavers at the time of each interview phase. Although only 44 percent of the school leavers in the master sample were interviewed, the status of only 9 percent of the universe is completely unknown.

TABLE 9

Location of Sample Interviewees During the Three Phases of Sampling

Status	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Completed Interviews	160	50	138	43	124	39	422	44
Noninterviews:								
Refusal	4	1	5	2	1	0	10	1
Unable to Contact	6	2	7	2	10	3	23	2
Unable to Locate	18	6	14	4	26	8	58	6
Nonsample:								
Resides Outside Detroit	30	9	24	7	35	11	89	9
Enrolled in School	4	1	50	15	10	3	64	7
Military Service	22	7	31	10	24	8	77	8
Employed Outside Detroit	51	16	26	8	59	18	136	14
Unemployed and Not Seeking Employment	27	8	17	5	26	8	70	7
Unemployed and Not Seeking Employment Because of School[1]	-	-	13	4	7	2	20	2
Total	322	100	325	100	322	100	969	100

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[1] Distinction between "Unemployed and Not Seeking Employment" and "Unemployed and Not Seeking Employment Because of School" was not ascertained in June, 1964, interview interval.

In Phase 1, 160 interviews were completed; 138, in Phase 2; and 124, in Phase 3 for a total of 422 completed interviews in all three interview phases. This number (422) of completed interviews was a sufficient sample size (n) for the analyses of the study under the various conditions of allowable error and probabilities associated with inferences that were drawn. A description of the procedures employed to obtain these confidence limits is presented in Appendix E.

Estimation of Sampling Error. The same statistical procedure was used to estimate sample error for school leavers as was used for employers (Appendix E). In grouping all 422 completed interviews, an allowable error of no more than 4.77 percent was provided for in the establishment of a 95 percent confidence interval estimate of the value of the universe parameter (P). The 95 percent confidence limit for each interview phase separately considered was ± 7.75 percent for Phase 1, ± 9.35 percent for Phase 2, and ± 9.96 percent for Phase 3.

Characteristics of the Sample. How do the 422 school leavers compare in intelligence with those of the master sample who did not meet the criteria? In Detroit, intelligence scores are classified according to Grade A, B, C, D, and E.

Table 10 shows the distribution of intelligence grades according to subjects from whom interviews were completed and subjects who did not meet the criteria.

TABLE 10

Intelligence Ratings of School Leavers by Interview Status: Complete or No Further Action

Interview Status						Intelligence Rating		
	A	B	C	D	E	Total	Not Available	Total
Complete	75	62	162	31	20	350	72	422
No Further Action	119	83	165	36	27	430	117	547

Applying the Kolmogorov-Smirnoff[3] two-sample test yielded .097 which is not significant at the .05 level. That is, there are no statistically significant differences between these two groups in term of intelligence ratings.

Again, 422 high school leavers from the master sample who were interviewed with those who did not meet the criteria, and thus were not interviewed, were compared to quartile rank according to grades in their high school class (Table 11).

TABLE 11

Complete and No Further Action Interviews Compared With Respect to Quartile Rank in High School Class

Interview Status	Quartile					Quartile Ranking	
	1st	2nd	3rd	4th	Total	Not Available	Total
Complete	107	78	91	100	376	46	422
No Further Action	152	93	104	119	468	79	547

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[3] Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, Inc., 1956), pp. 127-136.

The Kolmogorov-Smirnoff two-sample test yielded .0945 which is not significant at the .05 level. The foregoing two tests as between completed and noncompleted interviews in terms of intelligence and quartile rank do not prove, of course, that the two groups are identical. Yet, the possibility cannot be rejected.

Comparison of Dropouts Versus Graduates. In the original design of the study, an analysis was planned to compare the school leaver who withdrew from school during his senior year (dropout) with those who graduated in June, 1963. Forty "dropouts," thus defined, were drawn in the original sample. However, of these forty, 29 interviews were not completed for the following reasons.

TABLE 12

Reasons for Noninterviewed Dropouts

Reasons	Number
Living Out of Detroit	7
Working Out of Detroit	3
U. S. Military Service	6
Not Employed or Seeking Employment	3
Could not Locate	10
Total	29

Of the 11 completed, 9 had held an entry job and 2 had not--approximately the same proportion as other school leavers. Thus, because of the small sample and because subjects display a similar entry job pattern as others, this group of 11 dropouts is included with the total sample of school leavers.

Data Collection

The steps followed in the collection of data are briefly reported in the following sections. For a detailed description of each of the following steps, refer to Appendix F.

Survey Instruments

Preliminary drafts of the survey questionnaires (Appendices B and C) used for collection of data for both universes were field tested by both student and professional interviewers in the suburban areas of Detroit. The field tested questionnaires were analyzed in terms of clarity of questions and topic sequence. The format of the instruments for Phases 2 and 3 were modified slightly from those of Phase 1.

Preparation for Interview

Prior to each interview phase, specific procedures were performed such as obtaining copies of the school leavers' high school records; recording names, addresses, and telephone numbers as well as interview numbers to cover sheets of the questionnaires; mailing letters to employers and school leavers and the like.

The letters introduced potential respondents to the purposes of the study. For school leavers, however, the main purpose of mailing letters was to determine whether the respondents were still residing at the addresses given on the high school records. For those school leavers who had moved, the following procedures were used:

1. The same letter was sent by certified mail with a "Return Receipt Requested" notation.
2. In a few cases, addresses were obtained from the local telephone directory.

3. A local credit bureau was utilized for those persons who could not be located by certified mail.

Despite the foregoing, 6 percent of the school leavers could not be located and thus were classified as noninterview in the true sample.

Training of Field Personnel

Interviewers were selected from a list of personnel previously employed for such purposes by the Urban Research Laboratory of Wayne State University.

Prior to training, interviewers received printed materials explaining the purposes of the study. Prior to entering the field, a one-day training session was held: The morning was used to discuss interview instruments and techniques applicable to school leavers; the afternoon, to employers. These one-day sessions were repeated before each of the following two interview phases; and at each of these, a time was allotted to refresh the memory of interviewers about the scope and background of the study.

Individual conferences were held with the interviewers after each had completed two interviews of school leavers and employers to answer questions, solve problems, or correct misunderstandings.

Analysis of Data

The most important data of this study are those supplying information focused on entry jobs. Other data reflecting upon and modifying this information were also analyzed. Using the entry job as the focus, data were collected that would reveal the requirements for entry jobs in Detroit as well as how or why these entry jobs were filled.

Sorting and Classification of Data

Much of the data collected in this study were nominal in type, i.e., data that can only be enumerated by categorical occurrence. Some examples of the nominal type data collected during the study are:

1. Type of entry occupation
2. Type of business
3. Sources used in obtaining job

Other data collected were ordinal or ranking in type. An ordinal scale of data exists when conditions are such that it is possible to classify one object as greater than or less than another object in that scale. For example, in a given set of elements, element A is greater than element B, or B is less than A. Some examples of this type of data are:

1. Quartile rank of the school leavers by grades
2. Ranking of size of company by size categories

As well as the nominal and ordinal scales, information that could be classified as interval scale of measurement was collected in this study. An interval scale of data permits the relationship that A is greater than B as well as knowledge of how much greater A is than B. Some examples of the study that can be classified as interval are:

1. Number of entry job workers employed by types of companies
2. Number of jobs requiring a job skill

Techniques of Analysis

Various statistical measures were employed in answering the questions raised in this study. Because most of the data were nominal or ordinal in type, most of the tests employed were nonparametric. The specific tests employed were the chi square test, the Kolmogorov-Smirnoff test, and the Spearman's r_s test.[4] The parametric tests employed were the test of proportions, and a test of difference of proportions.[5]

Summary

In Chapter II, methods, design, sampling procedures, and methods of analysis utilized in the study have been presented. Appendix E provides additional information on the method of computing the sampling errors. Appendix F provides detailed accounts of the methods employed for each stage in the data collection phase of the study. The next chapter is concerned with a detailed discussion of the major findings.

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[4] Siegal, loc. cit.

[5] Hubert Blalock, Social Statistics (New York: McGraw-Hill Book Company, Inc., 1960), pp. 176-178.

CHAPTER III

ANALYSIS OF THE DATA

Introduction

In Section I, entry jobs as viewed by employers are considered. Data on the availability of entry jobs, versus actual hiring for entry jobs, are discussed according to size, types of businesses, and occupational titles. A unique feature of this section is the cross classification of entry jobs by occupational titles and types of businesses.

In Section II, data about entry jobs as viewed by school leavers are presented. The school leaver respondents' information relates to experiences in obtaining and holding initial jobs in the Detroit labor market. A feature of this section is the analysis of certain factors that influence whether the school leaver did, in fact, obtain entry employment.

In Section III, employment practices of Detroit businesses are discussed--both from the employers' and from the school leavers' viewpoints. The discussion is concerned with practices such as:

1. Where businesses seek beginning employees
2. Where school leavers seek employment
3. The use of screening devices in employment procedures
4. Testing and the nature of tests used for entry office and retail occupations
5. Separation from initial jobs

In Section IV, skills demanded for entry jobs in office and retail occupations are specified.

Section I

Entry Jobs as Viewed by Employers

Availability of Entry Jobs

In three separate interviews spaced over a year and a half, business repondents were questioned about the availability of entry jobs in their companies. The interviews are identified as Phases 1, 2, and 3 in the following data. Phase 1 interviews occurred in July, 1964; and employers were asked to respond to employment data in terms of the preceding two years, July 1, 1962, through June 30, 1964. Phases 2 and 3 interviews occurred in January, 1965, and July, 1965, respectively, with responses covering the preceding six-month periods (July 1-December 31, 1964, and January 1-June 30, 1965).

Number of Entry Jobs. In the first of a series of questions leading toward pinpointing the number and nature of entry jobs filled, respondents were asked:

> Q. 3. Do you have entry jobs for people between the ages of 16 and 21 who have a high school education or less and no previous experience on a similar or related full-time job? (That is, is there anything here that a young person without experience could do?)

Numbers and percents of each stratum of respondents answering "Yes" are tabulated in Table 1.

TABLE 1

Q. 3. Do you have entry jobs for people between the ages of 16 and 21 who have a high school education or less and no previous experience on a similar or related full-time job?

Size of Company by Number of Employees	Companies answering "Yes"					
	Phase 1		Phase 2		Phase 3	
	Number	Percent[1]	Number	Percent[1]	Number	Percent[1]
1 - 3	52	35	31	22	34	25
4 - 24	83	57	74	53	62	47
25 - 99	93	69	79	60	88	68
100 - 499	56	84	56	84	53	82
500 +	100	92	99	91	99	93
Aggregate[2]	14,300	47	10,959	37	10,719	38

[1] For tables in this section where the n is not shown, the percents are derived from the n's in Table 5, Chapter 2.

[2] Aggregates are determined by the formula $\sum W_1 N_1$: Where W_1's refer to weighting factors within strata (Table 3, Chapter 2, column 10) and N_1's refer to number of companies within strata answering in a certain manner.

In the tabulation, the sample has been expanded in the last line to the "Aggregate," i.e., increased in number to an estimate of the total universe of companies within the political boundaries of the City of Detroit. Thus, based on Phase 1, covering the two-year period (July 1, 1962, through June 30, 1964), 14,300 in number, or 47 percent, of Detroit businesses of all sizes had had entry jobs that could have been filled by 16-21 year olds; in Phase 2, 10, 959 in number, or 37 percent, in the six-month period of July 1 through December 31, 1964; and in Phase 3, 10, 719 in number, or 38 percent, January 1 through June 30, 1965. Note that the question indicates companies that had entry jobs that could have been filled, not actually filled. While differences are observed among the three phases of interviews, no discernible trend is noticed.

While Q. 3 related to companies who had available entry jobs, Q. 3a sought to determine those companies who do, as a general rule, hire 16-21 year olds.

TABLE 2

Q. 3a. As a general rule, do you hire high school graduates or dropouts aged 16-21 without previous full-time experience on a similar or related job?

Size of Company by Number of Employees	Companies answering "Yes"					
	Phase 1		Phase 2		Phase 3	
	Number	Percent[1]	Number	Percent[1]	Number	Percent[1]
1 - 3	34	23	23	16	21	15
4 - 24	55	38	48	34	44	33
25 - 99	64	48	64	49	62	48
100 - 499	43	64	44	66	44	68
500 +	89	82	94	86	91	85
Aggregate	9,609	31	7,894	27	7,371	26

[1] See Table 1 for definitions.

Consistently, the percent of company respondents who answered "Yes" was less in Q. 3a than those who so answered Q. 3. Of the 15 possible differences (three phases times five strata), 13 were determined to be statistically significant at the .05 level or above using a one-way test of difference of proportion. The only differences not significant occur in Phase 2 for the smallest companies (1-3 employees) and largest companies (500+ employees). These differences indicate that there are a significant number of companies that do have entry jobs, but who say they do not generally hire 16-21 year olds.

Company respondents who answered "No" to Q. 3 were asked further whether or not they would, under certain conditions, hire 16-21 year olds (Table 3).

TABLE 3

Q. 3b. Would you under certain conditions hire 16-21 year olds?

Size of Company by Number of Employees	Respondents' Replies								
	Phase 1			Phase 2			Phase 3		
	Yes	No	NA	Yes	No	NA	Yes	No	NA
1 - 3	12	3	1	9	-	-	10	3	-
4 - 24	21	6	1	21	5	-	15	3	-
25 - 99	29	1	-	15	-	-	24	3	-
100 - 499	13	-	-	10	1	-	8	-	1
500+	7	3	1	4	1	-	6	1	1
Totals	83	13	3	59	7	-	63	10	2

Perhaps the persistence of the questioning made the preponderance of "Yes" responses to the question (3b) as noted in Table 3. If so, the conditions that would cause a company to be willing to hire become important in interpreting the meaning. Of a total of 299 conditions indicated, "If the applicant was skilled in the job applying for" and "If jobs existed requiring no experience" were the most frequent conditions imposed by "Yes" respondents, accounting for 24 percent and 23 percent, respectively, or 47 percent combined, of all conditions. "If applicant made a good impression" ranked third with 18 percent of the responses; "If applicant is highly recommended" ranked fourth with 15 percent.

Apparently, age was not considered as an important condition since "If applicant meets a specified age" accounted for but 4 percent of the responses. This latter fact should be kept in mind when the report of school leavers' perceptions of factors for not being hired is given. Age appeared to school leavers to be the most important factor for not getting a job.

Respondents who answered "No" to question 3b were asked further the reasons why they would not under any conditions be willing to hire 16-21 year olds for entry jobs. Of a total of 40 reasons given in all three phases, 20 in number of the reasons offered were that 16-21 year olds were "Too immature and inexperienced"; 8 in number, or one-fifth of the reasons, were "Training time too long and/or expensive."

Companies with Entry Jobs During Interview Periods. Note again the sequence of the questions from general to specific. By responses sought, the questions were:

1. Q. 3 Jobs that could be handled by 16-21 year olds.
2. Q. 3a Willingness to hire this age group.
3. Q. 4 Vacancies existing during the survey period that could be handled by this age group.
4. Q. 4a Vacancies actually filled with people from this age group.

Tables 4 and 5 show responses to Q. 4 and Q. 4a. These tables relate specifically to currently existing vacancies and actual hiring of 16-21 year olds.

TABLE 4

Q. 4 Within the past (Phase 1: two years; Phases 2 and 3: six months) have you had jobs for people aged 16-21 without experience?

Size of Company by Number of Employees	Companies answering "Yes"					
	Phase 1		Phase 2		Phase 3	
	Number	Percent[1]	Number	Percent[1]	Number	Percent[1]
1 - 3	40	27	30	21	19	14
4 - 24	69	47	48	34	35	26
25 - 99	86	64	59	45	67	52
100 - 499	56	84	45	67	39	60
500+	95	87	86	79	90	84
Aggregate[1]	11,875	39	8,646	29	6,590	23

[1] See Table 1 for definitions.

TABLE 5

Q. 4a. Within the past (Phase 1: two years; Phases 2 and 3: six months) have you hired any such people aged 16-21 without experience?

Size of Company by Number of Employees	Companies answering "Yes"					
	Phase 1		Phase 2		Phase 3	
	Number	Percent[1]	Number	Percent[1]	Number	Percent[1]
1 - 3	40	27	23	16	14	10
4 - 24	65	45	43	30	26	20
25 - 99	83	62	56	43	62	48
100 - 499	56	84	43	64	37	60
500+	93	85	86	79	85	79
Aggregate[1]	11,573	38	7,406	25	5,305	19

[1] See Table 1 for definitions.

One might expect further decreases in "Yes" responses to Q.'s 4 and 4a over Q. 3a since the two questions in No. 4 begin to pinpoint availability and actual performance in hiring 16-21 year olds while Q. 3a tests but a disposition to perform. In Phase 1, the responses do not support the expected. "Yes" responses to Q.'s 4 and 4a indicate that the number of companies with beginning jobs available and the number who did in fact hire 16-21 year olds were larger than the number of companies indicating a disposition to hire them (Q. 3a). In Phase 2, there is not a consistent pattern of differences among the "Yes" responses in Q. 4 and 4a compared with 3a. In Phase 3, however, there is a significant decrease between the answers to Q. 4 and 4a compared with 3.

The differences as among the three interview phases between Q.'s 4 and 3a, however, were statistically significant at the .05 level in but 2 of the 15 possible relations (5 company sizes times 3 interview phases). In Phase 1, companies of 25 to 99 employees and of 100 to 499 employees yielded an identical Z of 2.64 as the two significant relations.

None of the 15 relationships as between Q.'s 4 and 4a were statistically significant at the .05 level of confidence. This suggests that perhaps in the thinking of company respondents a close relationship exists between actual hiring and availability of entry jobs. In other words, respondents may not have recognized availability if they did not in actuality fill the jobs with 16 to 21 year olds.

In checking the differences as among Phases 1, 2, and 3 of both Q.'s 4 and 4a, however, note a decreasing percent of "Yes" responses from Phases 1 to 2 and Phases 2 to 3. In Q. 4, the decrease as between Phase 3 and Phase 1 was significant at or above the .05 level in all but the largest size company with yields of Z scores as shown in Table 6 (Z=1.96 or larger is significant at the .05 level of confidence).

TABLE 6

Z Scores Between Phases 1 and 3 in Responses to Q. 4

Company Size	Z Score
1 - 3	2.71
4 - 24	3.63
25 - 99	1.96
100 - 499	3.07
500+	.63 (n.s.)[1]

---

[1] Not statistically significant at the .05 level

A similar check of the decrease in Q. 4a as between Phases 3 and 1 yielded significant results consistent with those of Q. 4. All but the largest size company yielded Z scores significant at or above the .05 level as follows:

TABLE 7

Z Scores Between Phases 1 and 3 in Responses in Q. 4a

Company Size	Z Score
1 - 3	3.67
4 - 24	4.43
25 - 99	2.28
100 - 499	3.08
500+	1.15 (n.s.)[1]

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[1] Not statistically significant at the .05 level

The decreases from Phase 1 and Phases 2 and 3 are probably due to the fact that Phase 1 covered a 24-month period while Phases 2 and 3 covered 6-month periods. The differences between Phases 2 and 3 may be explained by a changing job market, especially seasonal job fluctuations, for Phase 2 covered the months of July through December, while Phase 3 covered January through July.

Comparing Tables 4 and 5, the differences in those companies indicating having jobs during the period covered by the interview versus those actually hiring 16-21 year olds to fill the jobs were previously observed. Overall, approximately 7 percent fewer companies who had entry jobs had not filled them with 16 to 21 year olds, as noted. This was not significant at the .05 level of confidence. However, in Q. 4b, respondents who had jobs available but who had not hired 16 to 21 year olds to fill them were asked for reasons: "Why haven't you hired any?"

Of a total of 59 reasons offered for not doing so, 30 in number were accounted for by "Had no qualified applicant" (16 in number) and "None aged 16 to 21 applied for jobs" (14 in number). None reported "Business has been bad," reflecting the favorable economic climate during the three-year period covered by the study.

As related to entry jobs in all data presented thus far, note that a larger proportion of companies do not have and do not generally hire 16 to 21 year olds than those who do; and in the specific three-year period covered by this report, did not have and did not hire such workers. From 62 percent of all businesses (Phase 1) to 81 percent (Phase 3) did not hire 16 to 21 year olds for entry jobs--during a time that leaders of our country publicized the need for so doing;

during a time that personal appeals of the President to do so were addressed to the business community; during a time that Congress was enacting legislation designed to deal with problems of the under-employed or unemployed young worker; during a time of unprecedented economic prosperity in our nation.

Employment Practices for Entry Jobs in Office and Retail Occupations

Two questions were asked to determine specifically the job market for 16 to 21 year olds in office and retailing occupations.

4d. Were any of them (16-21 year olds) hired for OFFICE AND/OR RETAIL jobs?

4e. Were any of them hired for other types of jobs?

Tables 8 and 9 data have been expanded from the number of respondents in each stratum answering "Yes" to aggregate figures representing the total number of companies in each stratum and the total universe of Detroit businesses.

TABLE 8

Numbers and Percents of Companies Who Hired for Entry Jobs in Office and/or Retail Occupations

Size of Company by Number of Employees	Phase 1[1]		Phase 2[1]		Phase 3[1]	
	Number	Percent	Number	Percent	Number	Percent
1 - 3	2,160	12	1,320	8	840	5
4 - 24	2,040	23	1,080	13	540	7
25 - 99	1,320	49	620	24	830	32
100 - 499	980	73	640	48	600	46
500+	87	80	76	70	76	71
Aggregate[1]	6,587	22	3,736	13	2,876	10

[1] See Table 1 for definitions.

TABLE 9

Numbers and Percents of Companies by Size Hiring for Other Jobs

Size of Company by Number of Employees	Phase 1		Phase 2		Phase 3	
	Number	Percent[1]	Number	Percent[1]	Number	Percent[1]
1 - 3	2,760	16	1,560	9	960	6
4 - 24	2,100	24	1,800	21	1,080	13
25 - 99	820	30	640	24	640	24
100 - 499	620	46	460	34	320	25
500+	61	56	48	44	52	49
Aggregate[1]	6,361	21	4,508	15	3,052	11

[1] See Table 1 for definitions.

From Tables 8 and 9, note that approximately one half of all Detroit businesses that employed 16 to 21 year olds for all entry jobs did employ this age group in office and/or retail occupations. Observe, too, that the larger the company, the more likely it was to hire this age group for office and retail occupations. In fact, approximately 20 to 25 percent more of the larger companies employed for office and/or retail occupations than they did for all other entry occupations combined. Small companies (1-24 employees) hire fewer for office and/or retail occupations than they did for all other entry jobs.

Number of Entry Jobs Filled by 16-21 Year Olds

Detailed information regarding numbers and kinds of jobs filled by 16-21 year olds has been tabulated by company size, by type of company, and by job classification. These data for each interview phase have been expanded to aggregates for each stratum of the total sample and are included in Appendix G. The following information is extracted from them.

Entry Jobs Filled by Company Size

By dividing the total entry jobs reported filled by 16-21 year olds in Phase 1 (which covered a two-year period) and by adding the entry jobs filled in Phases 2 and 3 (each covering a six-month period), an estimated number of annual entry jobs filled by 16-21 year olds can be made (Table 10).

TABLE 10

Estimated Average Annual Entry Job Hires by Company Size

Size of Company by	1962-63[1] 1963-64		1964-65		Yearly Average 1962-65	
Number of Employees	Number	Percent	Number	Percent	Number	Percent
1 - 3	9,840	16	6,480	10	8,720	14
4 - 24	13,380	22	13,080	20	13,280	21
25 - 99	14,120	23	10,860	17	13,033	21
100 - 499	13,820	23	15,980	25	14,539	24
500+	9,641	16	18,246	28	12,508	20
Totals	60,801[2]	100	64,646	100	62,080[2]	100

[1] Periods for yearly averages run from July 1 to June 30.

[2] Discrepancy due to rounding.

We are unable to account for the decreased entry job hires by small companies in 1964-65 over the average of the preceding two-year period. Such differences would need to be studied over a longer period of time before a trend could be identified. Yet, in total average entry job hires, the increased annual hires in the period of

1964-65 may represent, among other factors, both increased business activity and an awakening among businessmen to their responsibility for employment of youth.

It should be noted especially that large companies hired approximately twice as many 16 to 21 year olds in 1964-65 as they did on the average in each of the preceding two years.

Using the three-year average of entry hires, a further estimate according to company size as between the number of entry jobs filled in office and retail occupations versus all other entry jobs was made (Table 11).

TABLE 11

Estimated Average Annual Numbers Hired for Office and/or Retail Versus Other Entry Jobs by Company Size

Size of Company by Number of Employees	1962-63[1] 1963-64		1964-65		Average	
	Office Retail	Other	Office Retail	Other	Office Retail	Other
1 - 3	5,220	4,620	2,640	3,840	4,360	4,360
4 - 24	8,040	5,340	5,700	7,380	7,260	6,020
25 - 99	3,470	10,650	3,000	7,860	3,313	9,720
100 - 499	10,110	3,710	8,680	7,300	9,633	4,906
500+	7,560	2,080	10,649	7,597	8,589	3,919
Totals	34,400[2]	26,400	30,669	33,977	33,155	28,925

[1] Periods for yearly averages run from July 1 to June 30.

[2] Discrepency due to rounding.

In only the largest companies did the number of office and retail workers increase in 1964-65 over the average of the preceding two years. This fact is interesting since the percent of these companies (500 plus employees) reporting hiring these workers decreased during this period.

For all other entry jobs, there was an increase of more than seven-thousand entry jobs in 1964-65 over the preceding two-year annual average. We are unable to account for the condition noted other than to suggest changing economic conditions during the time of the study.

Entry Jobs Filled by Type of Company

The data on estimated number of 16-21 year olds hired for entry jobs in three interview phases were also classified according to the Standard Industrial Classification groupings of business (Appendix G). The tabulation in Table 12 is a conversion of those data to estimated annual hires for three annual periods according to types of businesses.

TABLE 12

Estimated Annual Entry Job Hires by Standard Industrial Classification Groupings

Standard Industrial Classification Groupings	1962-63[1] 1963-64		1964-65		Yearly Average 1962-65	
	Number	Percent	Number	Percent	Number	Percent
Construction and Manufacturing, Durable	5,443	9	9,114	14	6,667	11
Manufacturing, Nondurable	1,577	3	4,038	6	2,398	4
Wholesale and Warehouse	4,230	7	3,180	5	3,830	6
Retail Trade	17,271	28	23,977	37	19,506	32
Financial, Real Estate, and Insurance	12,138	20	8,626	13	10,967	18
Business and Personal Service	11,924	20	10,561	17	11,469	18
Nonprofit	3,087	5	1,894	3	2,689	4
Entertainment and Professional	5,134	8	3,256	5	4,508	7
Totals	60,804[2]	100	64,646	100	62,084[2]	100

[1] Periods for yearly averages run from July 1 to June 30.

[2] Discrepancy due to rounding.

By inspection, the greatest increases in the period 1964-65 over the average of the preceding two years are reflected in companies in retail trade; construction and manufacturing, durable; manufacturing, nondurable. The greatest decreases in this latest year were in finance, real estate, insurance; and entertainment and professional services. With the limited longitudinal data, it is not possible to explain the changes or to suggest the changes as trends.

Entry Jobs Filled in Office and Retail Versus Other Occupations by Type of Company. In what proportions do the different types of businesses employ beginning workers in office and retail entry jobs? The tabulation according to interview phase is contained in Appendix G. Extracted from this table, the estimated annual hires in office and retail versus other according to type of business follows:

TABLE 13

Estimated Annual Hires in Retail and Office
Versus Other Entry Jobs

Standard Industrial Code	1962-63 1963-64		1964-65		Average	
	Retail Office	Other	Retail Office	Other	Retail Office	Other
Construction and Manufacturing Durable	1,396	4,047	755	8,359	1,182	5,484
Manufacturing, Non-durable	336	1,240	690	3,348	454	1,944
Wholesale Trade	2,110	2,120	1,040	2,140	1,754	2,128
Retail Trade	8,103	9,167	13,032	10,945	9,739	9,759
Finance, Real Estate, and Insurance	12,050	88	8,606	20	10,902	65
Business Services	5,479	6,445	3,208	7,353	4,722	6,747
Nonprofit	2,210	878	1,520	374	1,980	710
Professional and Entertainment Services	2,716	2,417	1,818	1,438	2,425	2,090
Totals	34,400	26,402[1]	30,669	33,977	33,158	28,927

[1] Discrepancy due to rounding.

The foregoing data suggest that the greatest opportunities for office and retail entry jobs are in the retail trade; finance, real estate, and insurance; and business services. The least opportunities appear to be in construction and manufacturing, durable; manufacturing, nondurable; wholesale trade; and business services. The greatest opportunities for entry hires in other than retail and office are in the retail trade; construction and manufacturing, durable; and business services, nonprofit. Not surprisingly, the least opportunity for other than office and retail entry jobs is in finance, real estate, and insurance.

Entry Jobs Filled by Occupational Title Areas

A further tabulation was made of the number of entry jobs hires for all three interview phases reported by respondents according to the _Dictionary of Occupational Titles_ by major classifications and expanded to an aggregate of the universe of companies (Appendix G). Again, these data have been rearranged below in annual averages for the three years of the study.

TABLE 14

Estimated Annual Numbers Hired in Entry Jobs by *Dictionary of Occupational Title* Classification

Dictionary of Occupational Titles (By Major Classifications)	1962-63[1] 1963-64		1964-65		Average	
	Number	Percent	Number	Percent	Number	Percent
Professional, Managerial	357	1	356	1	357	1
Clerical and Kindred	28,104	46	25,449	39	27,219	44
Sales and Kindred	6,316	10	5,220	8	5,951	10
Service	10,425	17	7,885	12	9,578	15
Agricultural, Fishery, Forestry	502	1	445	1	483	1
Skilled	1,689	3	2,011	3	1,796	3
Semiskilled	4,829	8	7,003	11	5,554	9
Unskilled	8,580	14	16,277	25	11,146	17
Totals	60,802[2]	100	64,646	100	62,084	100

[1] Periods for yearly averages run from July 1 - June 30.
[2] Discrepancy due to rounding.

Contrary to popular belief, these data reflect the greatest increase of entry job hires in 1964-65 over the previous two-year average in unskilled job titles. The average unskilled hires for the latest year (1964-65) is almost double that of the preceding two years. Increases are also reflected in semiskilled and skilled. The important decreases are in clerical and kindred (approximately 10 percent), sales and kindred (approximately 17 percent), and service (approximately 24 percent).

Entry Jobs Filled by Occupational Title and Types of Business

In cross classifying numbers hired according to the Dictionary of Occupational Title classifications and Standard Industrial Classification types of businesses, a different picture of where office and retail workers obtained their jobs is seen (Table 15).

While the retail trade employed an annual average of 19,506 entry workers, 4,813 in number, or approximately 25 percent of the total employed by the retail trade, were classified as sales and kindred job titles. The retail trade employed more clerical and kindred workers (120 more) than sales and kindred workers.

Clerical and kindred workers account for 44 percent of the yearly annual entry job employment. More than twice as many clerical workers are employed in financial, real estate, and insurance type businesses than in any other type. Retail trade and business and personal services rank second and third respectively.

Accuracy of Predictions of Companies in Hiring Entry Workers

How reliable are the predictions of business respondents in anticipating their needs for beginning office and retail workers? Respondents in all interview phases were asked to predict whether or not they anticipated hiring such workers in the next six months (Appendix G). It was possible to check the anticipated in Phases 1 and 2 against the actual performance in Phases 2 and 3 (Table 16).

TABLE 15

Average Yearly Hires for 1962-64 by Type of Business and Type of Occupation

	Professional Managerial	Clerical Kindred	Sales Kindred	Service	Agriculture Fishery Forest	Skilled	Semi-Skilled	Un-Skilled	Totals[1]
Construction and Manufacturing, Durable	59	1,142	40	149	-	442	1,191	3,643	6,667
Manufacturing, Non-durable	12	412	42	87	-	113	443	1,288	2,397
Wholesale and Warehouse	13	1,373	393	73	-	80	400	1,547	3,880
Retail Trade	34	4.933	4,813	6,667	-	22	1,363	1,675	19,506
Financial, Real Estate and Insurance	-	10,442	461	3	-	17	41	4	10,967
Business and Personal Services	8	4,580	141	1,268	2	1,115	1,599	2,756	11,469
Nonprofit	34	1,980	-	139	13	-	350	173	2,689
Entertainment and Professional	197	2,357	60	1,192	468	7	167	60	4,508
TOTALS [1]	357	27,219	5,951	9,578	483	1,796	5,554	11,146	62,084

[1] Discrepancy in row and column sums due to rounding in internal cells

TABLE 16

Accuracy of Prediction of Anticipated Hiring of Entry Office or Retail Workers

Size of Company by Number of Employees	Prediction: Phase 1 Phase 2 Percent	Actual Hires Phase 2 Phase 3 Percent
1- 3	92	93
4- 24	82	86
25- 99	76	75
100-499	70	65
500 +	81	79

The smaller companies' accuracy of prediction was greater than that of the larger companies. However, the prediction accuracy of the two larger size companies (100 plus employees) was relatively high: with an average of from 65 percent to 81 percent accuracy of prediction compared with actual hires. At a later time, if an entry job index is to be developed, predictions of businessmen concerning their anticipated hire would appear to be a factor to consider for inclusion in the index--especially if projections beyond the present are to be made.

Summary

From the responses of Detroit companies in three interview phases, the following facts are revealed concerning the availability of entry jobs:

(1) A range of 38 percent (Phase 3) to 47 percent (Phase 1) of all businesses had jobs that could be filled by entry workers. Fewer companies

actually did hire than had jobs available: 19 percent (Phase 3) and 38-percent (Phase 1). Without indicating a trend, there does seem to be a relationship between availability and actual hiring.

(2) Approximately as many Detroit businesses hired to fill entry jobs in office and retail (22 percent to 10 percent) as in all other occupations (21 percent to 11 percent).

(3) In the three-year period covered by this report, the average annual entry jobs filled were approximately 62,000. In 1964-65, approximately 4,600 more entry jobs were filled by entry workers than the annual average in the preceding two years.

(4) Considering the three year annual average of entry hires, approximately four thousand more entry jobs were filled in office and retail occupations than in all others. However, in the last year of the study (1964-65) all other occupations' entry job hires exceeded office and retail hires by approximately 3,300. Unskilled employment doubled in this last year.

(5) Retail trade; business and personal services; and financial, real estate, and insurance types of businesses ranked first to third in numbers of entry hires and accounted for approximately two-thirds of the three-year annual average of all hires.

(6) Clerical and kindred job classifications accounted for 44 percent of the three-year annual entry job hires. Unskilled was second with 17 percent; service third, 15 percent; and sales, fourth with 10 percent of all entry job classifications. In 1964-65, the number of unskilled jobs almost doubled over the preceding two-year annual average (16,277 and 8,580, respectively). Decreases in 1964-65 were reflected in clerical (down 7 percent), service (down 5 percent), and sales (down 2 percent) over the preceding two-year annual average.

(7) Cross classifications of entry job classifications filled with types of jobs indicates that while retail trade employed an annual average of 19,506 workers, 4,813 of these were in sales job classifications. Service and clerical job classifications accounted for more employment in the retail trade than did sales. Approximately two-fifths (10,472 of 27,219 in number) of entry jobs filled in clerical occupations were in financial, real estate, and insurance type businesses; approximately one-fifth each were filled in business and personal services (4,580 in number) and retail trade (4,933 in number).

(8) All sizes of companies proved to be significantly accurate in predicting the number of entry jobs to be filled within six-month periods with accuracy ranging from 65 percent to 93 percent. The smaller companies proved to be more accurate than the larger companies.

Section 2

Entry Jobs as Viewed by School Leavers

School Leavers in the Entry Job Market

How do school leavers from the Detroit Public Schools fare in the Detroit entry-job market? To answer this question, a sample of 422 school leavers who graduated in June, 1963, (or should have graduated--11 in number who dropped out of school during the 1962-63 school year) were interviewed: 160 in July, 1964; 138 in January, 1965; and 124 in July, 1965. A description of the sample drawn from a universe of 7,752 Detroit school leavers of 1963 is in Chapter II.

Of first importance in answering this question was whether the school leavers had, in fact, obtained full-time jobs. These data were determined from responses to the following question:

> Q. 9. What was the first job you had after leaving high school?. . . the next job, etc.

In terms of the total sample for the three interview phases, the following tabulation indicates those who had or had not held a full-time job.

TABLE 17

Numbers and Percents of School Leavers
Who Held an Entry Job

Held an Entry Job	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	125	78	112	81	104	84	341	81
No	35	22	26	19	20	16	81	19
Total	160	100	138	100	124	100	422	100

Thus, approximately one year after leaving school, 78 percent of the first sample had held an entry job and 22 percent had not. Note particularly that the percent of those having held an entry job did not increase appreciably through time. Phases 2 and 3 samples, spaced at six-month intervals, reflect a 3 percent increase (Phase 2: from 78 to 81 percent; Phase 3: from 81 to 84 Percent).

Thus, while 78 percent had held an entry job by approximately one year after leaving high school, the chances of the unemployed 22 percent getting a job during the second year were about one in four. Considering the three samples as a whole, there appears to be the beginning of a hard core of unemployed: 16 percent of Phase 3 respondents had not held one full-time job two years after graduation.

With 16 percent of the Phase 3 sample unemployed at the end of two years, one might ask, "When is the critical time after leaving school for obtaining the entry job?" To answer the question, a subsample (Phase 3) of school leavers was analyzed from graduation (June, 1963) to the time of interview, two years later (Table 18) as to the date they obtained their entry job.

TABLE 18

Percent of Phase 3 Subjects Obtaining Entry Employment by Months After Graduation

Months From June, 1963	Percent Obtaining Entry Job	Percent (Cumulative)
3	47	47
6	8	55
9	5	60
12	11	71
18	7	78
24	6	84
Not Held Entry Job	16	100
Total	100	

Thus, the critical time for obtaining an entry job appears to be in the first three months after graduation. Forty-seven percent of this sample had obtained their first full-time job then. A fruitful future study of the current interview data would be a division of the school sample according to those who had had their first full-time job by the end of three months after graduation compared with those who had not. But since there also appears to be a high turnover, and thus instability in the initial jobs held, as will be seen later, the problem of school personnel becomes one of preparing the school leaver not only to obtain the initial job but also to hold it.

A test of proportion as between Phases 1 and 3 of those who had or had not held entry jobs yielded a Z of 1.22, which is not significant at the .05 level. Because the time covered by this study does not appear to affect the significance of results from the subsamples, it is possible to combine the three samples and deal with the total of 422 school leavers as one. Some of the following data are reported in this form.

Factors Influencing Entry Employment. What is the influence of certain factors on whether or not the total sample of 422 school leavers had or had not held an entry job? To determine whether these factors were significant, a chi square test was applied (Table 19).

TABLE 19

Chi Square Test Applied to Factors of Influence in Having an Entry Job

Factor of Influence	Chi Square	Coefficient of Contingency	Degrees of Freedom	Significant at or Above
Intelligence Score	1.171	.053	5	ns[1]
Quartile Rank	1.635	.062	3	ns
Curriculum	.006	.004	1	ns
Business Versus Non-business Courses Taken	2.902	.083	2	ns
"Co-op" Work Study	3.000	.085	1	.02
Sex	14.980	.185	1	.001
Race	19.560	.210	1	.001
Sex and Race	42.066	.301	3	.001

[1] Not significant at the .05 level of confidence

Intelligence scores and grades according to quartile rank in the class were not significant influences in whether the school leavers of 1963 had had an entry job. Similarly, the school leavers' curriculums, a factor consisting of those who had taken typewriting versus those who had taken other business courses versus those who had not taken a business course, were not significant at the .05 level.

Of the 422 school leavers interviewed, 43 in number, or 10 percent had been previously enrolled in a high school cooperative work-study program. Three-fourths of these were in office "co-op" and the other fourth were in retail or service occupations.

Of the "co-op", 95 percent had had an entry job compared with 79 percent of those who had not participated in this type of program, a difference significant at the .02 level. However, in applying the chi square test to the difference with respect to holding a current job between "co-op" and those not in such a program, there was no significant difference at the .05 level. Therefore, while "co-op" programs appear effective in helping students obtain an entry job, evidence does not support the proposition that "co-op" aids the school leaver in retaining full-time employment.

Factors of sex, race, and sex and race combined were significant at the .001 level. Considering race, 34 of a total of 267 whites in number, or 13 percent, had not held an entry job; 47 of a total of 153 nonwhites in number, or 31 percent, had not held an entry job.

The influence of being a nonwhite female is the most detrimental of the factors in not obtaining an entry job. Among the males, the proportion of whites and nonwhites who had not held an entry job is approximately the same (whites: 11 of a total of 109 in number, or 10 percent;

nonwhites: 4 of 48 in number, or 12 percent). But among the female whites, 23 of 158 in number, or 15 percent, had not held entry jobs; compared with female nonwhites, 43 of 107 in number, or 40 percent, had not held any entry jobs.

Pertinent to the foregoing factors influencing obtaining an entry job are the perceptions of high school leavers of factors which they felt affected their getting or not getting a job (Table 20).

With inspection of Table 20, one suspects race as influencing a "Yes" or "No" response. To determine more specifically the meaning of the responses, those answering "Yes" to Q. 20 were asked which factors influenced their not getting a job (Table 21).

TABLE 20

Q. 20. Have You Ever Felt That Your Age, Sex, Race, Religion, or Place of Birth Was a Factor in Not Getting a Job?

Answers	SEX								RACE				TOTALS	
	Male				Female									
	White		Nonwhite		White		Nonwhite		White		Nonwhite		White and Nonwhite	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	38	35	22	46	65	42	58	54	103	39	80	52	183	44
No	71	65	26	54	91	58	49	46	162	61	75	48	237	56
Totals	109	100	48	100	156	100	107	100	265	100	155	100	420[1]	100

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[1] Discrepancy of two from total population of 422 due to nonanswers.

TABLE 21

Q. 20a. Which of These Factors Age, Sex, Race, Religion Was a Factor in Not Getting a Job?

Perceived Factor of Influence	SEX								RACE				TOTALS	
	Male				Female									
	White		Nonwhite		White		Nonwhite		White		Nonwhite		White and Nonwhite	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age	37	97	12	55	63	97	42	72	100	97	54	68	154	84
Sex	3	8	1	5	2	3	2	3	5	5	3	4	8	4
Race	-	-	11	50	-	-	25	43	-	-	36	45	36	20
Religion	-	-	-	-	1	2	-	-	1	1	-	-	1	1
Place of Birth	-	-	-	-	1	2	-	-	1	1	-	-	1	1
Number of Respondents[1]	38	100	22	100	65	100	58	100	103	100	80	100	183	100

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[1] Respondents gave more than one answer.

Age is perceived by all four groups as a factor influencing not getting a job. None of the business respondents, it should here be reiterated, considered being a specific age to be a condition for hiring a 16-21 year old. Yet, of the reasons given by those who would not employ this age group, half of the reasons were "Too immature and inexperienced."

It is interesting to note that age was considered less important by nonwhites, both male and female, probably because race received first emphasis by nonwhites. Race was, of course, perceived as an important factor by both male and female nonwhites. Unlike the previous data that showed female nonwhite as the group least likely to have held an entry job, a slightly larger proportion of male nonwhites perceived race as a factor for not getting a job than did female nonwhites.

Work Experiences of School Leavers

Thus far, data related to whether the total sample had or had not held an entry job have been dealt with. The following information is concerned with the 341 of the total sample who had had entry jobs by size of company, type of business, Dictionary of Occupational Title classification, and similar data related to conditions of working or holding a job as well as all who had had part-time employment.

Since some of these data parallel data obtained from Detroit businesses, comparisons will provide additional information to answer the question posed at the beginning of this section:

> How do school leavers from the Detroit Public Schools fare in the Detroit entry job market?

Employment Pattern of School Leavers. While 81 of 422 in number, or 19 percent, of school leavers had not held some kind of full-time employment at the time they were interviewed, 20 in number, or 5 percent of the total, reported not holding any kind of employment, part- or full-time. To examine the pattern of employment in the interim of approximately one to two years after leaving school is our purpose here.

Extracted from Question 9 (Appendix C) was whether or not the first job held after leaving high school was full- or part-time.

TABLE 22

First Job: Part- or Full-Time

Response	Number	Percent
Full-Time	267	63
Part-Time	134	32
No Job	20	5
Not Answered	1	0
Total	422	100

Whether or not the first job was part- or full-time, evidence points toward instability in early employment, judged by the number of jobs held. The following tabulation indicates the number of part- and full-time jobs reported held by school leavers.

TABLE 23

Number of Part- and Full-Time Jobs Held

Number of Jobs Held	Part-Time		Full-Time	
	Number	Percent	Number	Percent
1	122	29	165	39
2	46	11	102	24
3	18	4	52	13
4	6	1	16	4
5	2	1	4	1
6	-	-	1	0
Not Answered	-	-	1	0
Subtotal	194	46	341	81
None Held	228	54	81	19
Total	422	100	422	100

Thus, 194 school leavers reported holding from one to five part-time jobs. Of those reporting holding full-time jobs, the range was from one to six. The person reporting six had been interviewed 18 months after June, 1963: a rate of one full-time job every three months. Of those reporting one or two full-time jobs (267 in number) 102 of them, or 38 percent, had changed employment once. Of the remaining 73 in number, or 21 percent of the total of 341, the turnover rate ranged from three months for the person reporting six full-time jobs to approximately six months for those holding three jobs during the period covered.

That there is considerable instability in initial jobs held can be observed in the following tabulation of the length of time reported spent on each of the first three full-time jobs.

TABLE 24

Reported Time Spent on First Three Jobs

	Job 1		Job 2		Job 3		Total	
Months	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 3	160	47	92	52	39	54	291	50
4 - 6	46	13	44	25	12	16	102	17
7 - 8	20	6	7	4	4	6	31	5
9 - 12	37	11	12	7	9	12	58	10
12 +	77	23	21	12	9	12	107	18
Not Answered	1	0	-	-	1	0	-	-
Totals	341	100	176	100	74	100	589	100

Whether it was the first, second, or third full-time job held, approximately 50 percent of the school leavers reported holding these jobs for less than four months, a turnover rate that most businessmen consider prohibitive in cost of induction and training. While the data do not show that the short-term worker is the same person, one suspects an overlap.

Looking at those who held their jobs for more than one year, the data are not too clear because the study extended only two years from graduation date of most of the school leavers. Yet, of the total full-time jobs reported, 67 percent had been held for six months or less while 33 percent had been held longer than that time.

Periods of Unemployment. Another indication of instability of 16-21 year olds in initial jobs is reflected in the periods of unemployment reported.

TABLE 25

Q. 15 Since You Left School, Have You Been Out of Work and Looking for a Job?

Response	Number
Yes	236
No	169
Not Answered	17
Total	422

From the tabulation of Q. 15a, Table 26 is arranged according to the number of periods of unemployment reported by 236 respondents and the average months of unemployment per period.

TABLE 26

Average Period of Unemployment by Number of Times Unemployed

Average Months of Unemployment Per Period	Number of Periods of Unemployment				
	One	Two	Three	Four	Total
0 - 1	31	8	2	1	42
1 - 2	29	10	6	-	45
2 - 3	25	11	2	-	38
3 - 4	15	4	5	1	25
4 - 5	13	8	3	1	25
5 +	43	13	4	1	61
Totals	156	54	22	4	236

From Table 26, observe that 111 in number of the 236 (or 47 percent) who had been unemployed and looking for work had been unemployed for an average of three months or more in the two-year period from one to four times. Sixty-one in number, or 28 percent, had been unemployed on the average for five months or more for each unemployed period. Note, too, that 80 in number, or 34 percent, had experienced two or more periods of unemployment.

Again, these data point to the instability of employment of 16-21 year olds in their initial jobs.

To show further the instability of initial jobs, the reasons reported for leaving the first three jobs are tabulated.

TABLE 27

Reasons Given for Leaving Jobs

Reasons Given For Leaving	Job 1		Job 2		Job 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Further Schooling	50	23	6	7	3	10	59	18
Left for Better Job	48	23	21	23	6	21	75	23
Other Voluntary Reasons	52	25	24	27	9	31	85	26
Involuntary Reasons (fired, laid off, etc.)	61	29	39	43	11	38	111	33
Totals	211	100	90	100	29	100	330	100

The reasons listed are those reported by respondents. A natural tendency might be to shield involuntary reasons for leaving, such as dismissal. Yet, 111 in number, or 33 percent, of the total of all reasons given for leaving a job were classified as involuntary. In a labor market that is in short supply of workers such as that during the period of this study, a 33 percent mismatch of beginning workers and entry jobs has educational implications.

Pertinent to the foregoing discussion is information from employer respondents concerning reasons for dismissal of office and retail employees. In Phase 1, July, 1964, 59 percent of the universe who anticipated hiring 16-21 year old office and retail workers had dismissed 16-21 year old workers for these jobs in the past two years; in Phase 2, January, 1965, 32 percent had dismissed 16-21 year old office and retail employees in the past six months; in Phase 3, July, 1965, 40 percent had done so in the past six months.

The 385 responses given for reason of dismissal were grouped in all phases in the following categories: incompetence and inability to do the job was mentioned most, 136 times, 35 percent; negative attitude and personality, 129 times, 33 percent; absenteeism and tardiness, 69 times, 18 percent; dishonesty, theft, and falsification of data on employment application, 29 times, 8 percent; while other reasons given for dismissal were given 25 times, 7 percent. Employers' reasons given for dismissal add meaning to the involuntary reasons suggested by school leavers for leaving their job.

To return to the school leaver data, 59 of a total of 330 reasons offered for leaving jobs, or 18 percent, were for additional schooling. The meaning of this response is not clear. It could mean that some school leavers sought and received summer full-time jobs prior to going to college; or, it could mean, for example, that some school leavers found, after obtaining full-time employment, the need for additional training.

Characteristics of Businesses in Which School Leavers Were Hired

Questions asked school leavers concerning size, type, and job classification parallel similar data obtained from business respondents. As such, responses from these will provide comparisons to indicate how the Detroit school leaver fared in the Detroit labor market.

Size of Company. In the second and third phases of interviews, (262 school leavers of the total 422 in number) questions were asked concerning the size of the company in which respondents received their entry job. Of the total of those interviewed in these two phases, 112 in Phase 2 and 104 in Phase 3 or 216 in all had held an entry job. Size of the installation in which this job was held was reported as follows:

TABLE 28

Size of Company in which Entry Job Was Obtained

Size of Company	Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent
1- 3	12	11	11	11	23	11
4- 24	23	21	21	20	44	20
25- 99	18	16	11	11	29	13
100-499	17	15	17	16	34	16
500+	29	26	35	34	64	30
No answer or don't know	13	11	9	8	22	10
Totals	112	100	104	100	216	100

Of 194 usable responeses to the question, company size in which school leavers reported being hired is compared with the estimate percents of total hires as reported by business respondents.

TABLE 29

Full-Time Entry Jobs Filled by Detroit Businesses and Those Obtained by School Leavers According to Company Size

Size of Company	Full-Time Hires Reported by: Detroit School Leavers Percent N= 194	Full-Time Hires Reported by: Detroit Business Respondents Percent N = 62,080
1- 3	12	14
4- 24	23	21
25- 99	15	21
100-499	18	24
500 +	32	20
Totals	100	100

The pattern of which size companies the school leavers were hired into is statistically different from the pattern expected as reported by the employers. Using the Kolmogorov-Smirnoff[1] one sample test, and comparing the distribtuion of the school leavers to what would be expected (the report of the business community), there is a statistically significant difference at the .05 level of confidence.

A higher proportion of Detroit school leavers go into businesses of over 500 employees than would be expected from the employer reports. Note, however, that this increase in the companies of over 500 employees comes not at the expense of the smaller companies, 1-24 employees size companies, but rather from the medium 25-499 employee size companies.

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[1] Siegal, loc.cit., p.47-52

Types of Businesses

The standard industrial classification of businesses in which school leavers obtained employment is reported in Table 30 according to the first, second, and third full-time jobs reported.

TABLE 30

Types of Businesses in which School Leavers Were Employed in First Three Full-Time Jobs

Standard Industrial Classification	Job 1		Job 2		Job 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Construction and Manufacturing, Durable	50	15	44	25	24	32	118	20
Manufacturing, Non-Durable	15	4	13	7	5	7	33	6
Warehousing and Wholesale Trade	11	3	3	2	2	3	16	3
Retail Trade	104	30	51	29	20	27	175	30
Financial, Real Estate, and Insurance	39	12	19	11	4	5	62	10
Business and Personal Services	66	19	28	16	10	14	104	17
Nonprofit Services	19	6	6	3	4	5	29	5
Entertainment and Professional Services	36	11	12	7	5	7	53	9
No Answer	1	0	-	-	-	-	1	0
Totals	341	100	176	100	74	100	591	100

The type of business in which school leavers reported obtaining their first, second, and third jobs remains relatively proportionate. The first three ranking types of businesses were retail trade; construction and manufacturing, durable; and business and personal services.

Note that 30 percent of the school leavers reported being employed in a business classified by SIC as "Retail Trade;" and according to Table 31, 32 percent of all entry jobs reported by employers were in this same type of business. However, type of business classification should not be confused with DOT classifications which is the focus of this study. For example, in Table 32, 7 percent of school leavers obtained DOT Sales jobs.

TABLE 31

Types of Businesses in which School Leavers Were Hired Versus Entry Jobs Filled by Detroit Businesses

Standard Industrial Classification	School Leavers Percent N = 590	Entry Jobs Filled Percent N = 62,084
Construction and Manufacturing, Durable	20	11
Manufacturing, Nondurable	6	4
Wholesale and Warehouse Trade	3	6
Retail Trade	30	32
Financial, Real Estate, and Insurance	10	18
Business and Personal Services	17	18
Nonprofit	5	4
Entertainment and Professional Services	9	7
Totals	100	100

The foregoing classification of jobs obtained can now be compared with the entry jobs filled as reported by Detroit businesses. For the comparison total percents of the first three jobs as reported by school leavers according to type of business are paired with the three-year annual average of hires as reported by the Detroit business community.

Using a one sample chi square test to compare goodness of fit of the observed school leavers distribution with the expected school leavers distribution (derived from the employer reports), a chi square of 67.2 was determined. This indicates that there is a statistically significant difference between the observed and expected frequencies at the .001 level of confidence. The difference results chiefly from more Detroit school leavers entering "construction and manufacturing, durable" type businesses than would be expected from the employer's report. Fewer Detroit school leavers entered "financial, real estate, and insurance" type businesses than would be expected.

Dictionary of Occupational Title Classifications

The first three full-time jobs filled by Detroit school leavers according to the Dictionary of Occupational Title classifications are reported in Table 32.

While clerical and kindred occupations ranked first in all three jobs held, note the decrease in this classification from first (44 percent) to second (36 percent) to third (27 percent) full-time jobs reported. In the third job, the decrease in clerical as observed was offset by increases in semiskilled, service, and skilled classifications. While sales ranked sixth in a total of eight classifications, note a similar decrease from first

TABLE 32

Dictionary of Occupational Title Classification of First, Second, and Third Full-Time Jobs Held by School Leavers

DOT Classification	Job 1		Job 2		Job 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Professional and Managerial	11	3	8	4	3	4	22	4
Clerical	149	44	63	36	20	27	232	39
Sales	29	9	9	5	3	4	41	7
Service	42	12	19	11	12	16	73	12
Agricultural, Forestry, and Fishery	1	0	-	-	-	-	1	0
Skilled	20	6	17	10	10	14	47	8
Semiskilled	41	12	30	17	16	21	87	15
Unskilled	48	14	30	17	10	14	88	15
Totals	341	100	176	100	74	100	591	100

(9 percent) to second (5 percent) to third (4 percent). In skilled and semiskilled classification, the reverse is true. Of these changes the following are significant at or above the .05 level:

1. The decrease from 44 to 27 in the percent of jobs in the clerical field from first full-time to third full-time job.
2. The increase from 6 to 14 in the percent of jobs in the skilled occupations from first full-time to third full-time job.
3. The increase from 12 to 21 in the percent of jobs in the semiskilled occupations from first full-time to third full-time job.

We can only speculate about the reasons for the foregoing. Could it be that some who at first held clerical jobs found their preparation inadequate and moved to less demanding types of work? Could it be that some entering a surfeited sales classification moved to more desirable jobs? Could it be that added training accounted for an increased skilled and semiskilled classifications? Each of these possibilities appears plausible.

To compare how Detroit school leavers fared in the Detroit entry job market according to job classifications, the average of the first three jobs held in each classification is compared with the average entry jobs filled by Detroit businesses.

TABLE 33

Comparison by *Dictionary of Occupational Title* Classifications of Jobs Obtained by School Leavers with Those Filled in Detroit Businesses

DOT Classification	School Leavers Percent N = 591	Detroit Businesses Percent N = 62,084
Professional and Managerial	4	1
Clerical	39	44
Sales	7	10
Service	12	15
Agricultural, Forestry, and Fishery	0	1
Skilled	8	3
Semiskilled	15	9
Unskilled	15	17
Total	100	100

A chi square one-sample test to test goodness of fit was conducted on the responses of the school leavers using as expected frequencies the responses of the employers. A chi square of 6.67 with 6 degrees of freedom (the grouping of agricultural, forestry, and fisheries was excluded in this computation) was obtained. This value is not significant at the .05 level. A value of 6.67 could occur by chance alone almost 50 percent of the time. The slight differences are not only not significant, but fall in no differen pattern from that of the employers.

Factors Influencing Type of Entry Occupation

Just as certain factors were investigated to determine their influence on whether the school leaver obtained an entry job, the same or similar factors[2] were investigated to determine their effect on the type of entry job of the school leaver. Table 34 shows the results of the chi square test used to list the relationships.

TABLE 34
Chi Square Test Applied to Factors of Influence on Type of Entry Job

Factor of Influence	Chi Square	Coefficient of Contingency	Degree of Freedom	Significan at or abov
Intelligence Score	29.841	.310	12	.01
Upper or Lower Half of Class	12.168	.116	6	ns[1]
Curriculum	59.323	.388	6	.001
Business Courses	48.816	.350	12	.001
Sex	150.361	.553	6	.001
Race	17.720	.222	6	.01

[1] Not significant at .05 level of confidence

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[2] Because of necessary conditions as to number of cases for use of the chi square test, some factors were changed slightly, and the factor of "co-op" program eliminated.

The school leavers intelligence rating, while proving not significant in terms of obtaining an entry job, had a relation as to what type of entry occupation the school leaver obtained. The school leavers were divided into three groups for the use of this list: high, A and B intelligence ratings: average, C intelligence rating: and low, D and F intelligence ratings. While 54 percent of the high group went into clerical occupations and 44 percent of the average went into clerical occupations, only 17 percent of the low group did so. However, while only 22 percent of the high group and 28 of the average group went into the semiskilled and unskilled occupations, 37 percent of the low group were employed in these categories. While 17 percent of the low group were in retail occupations, only 5 percent of the high group were there.

Those students in a business curriculum had a pattern of entry job types different from those students in nonbusiness curriculums. While 79 percent of the business students' entry jobs were office or retail jobs and 21 in other areas, 41 percent of the nonbusiness students were in office and retail and 59 in other areas.

Of the school leavers who had taken no business courses in high school, 18 percent had an entry job in the office occupations. For those who had taken typing as their only business course, 31 percent had an office entry job, and for those who had other business courses than typing, 56 percent went into the office occupations for their entry job.

The factor of sex was the most important influence in determining the type of entry jobs of school leavers. In office occupations, 66 percent of the school leavers were females; 13 percent, male. In the semiskilled and unskilled jobs, 7 percent were female and 54 percent male.

Race was an influence in whether an individual entered service and skilled occupations. In the entry service occupations, 22 percent were nonwhite; 8 percent, white. In entry skilled occupations 2 percent were nonwhites; 8 percent, white.

Summary

Eighty-one in number, or 19 percent, of 422 school leavers reported not having held an entry job from one to two years after leaving school. The critical time for getting a full-time entry job is the first three months following graduation.

Factors of influence in having an entry job that were significant at or above the .02 level of confidence were "co-op" work study, sex, race, and sex and race combined. Of these, the influence of being a negro woman was the most influential of all. Among school leavers, however, age was considered to be the most important factor in not getting a job. As many negro men as women thought that race influenced their not getting an entry job.

Considerable instability was experienced by school leavers in getting and holding their initial jobs. Forty-two percent of all school leavers had held more than one full-time job at the time of interview. Forty-nine percent of those holding from one to three jobs reported holding those jobs three months or less. Unemployment periods of as many as four in number were reported with each period ranging to as much as five or more months. At least 33 percent of the reasons offered for leaving initial jobs were involuntary reasons. Employers reported incompetence and inability to do the job (35 percent) and negative attitude and personality (33 percent) as the two most important causes of dismissal.

Detroit school leavers tend to be employed in the larger companies more than would be expected by the Detroit business hiring pattern. 78 percent of initial entry jobs of school leavers are accounted for in retail trade; construction and manufacturing, durable; business and personal services; and financial, real estate, and insurance type businesses. Clerical, semiskilled, unskilled and service accounted for 81 percent of the job classification. Sales accounted for an additional 7 percent.

Significant influences in the kind of job classification held proved to be the curriculum followed in high school, the kind and number of business courses taken, sex, and race. A "co-op" work study program does give a school leaver an advantage in obtaining an initial job but not necessarily in holding it.

Section 3

Employment Practices of Detroit Businesses

To discuss later specific skills required of entry job workers, certain employment practices of business respondents and of school leavers are important to take into consideration. The questions to be answered here relate to office and retail occupations. Some of these questions are: (1) What are the recruiting practices of Detroit businesses? (2) What are the sources used by Detroit school leavers to find jobs? (3) What are the screening and testing practices used by business?

Business Recruiting Practices in Filling Entry Office and Retail Jobs

Where do employers look for beginning office and retail workers? Table 35 shows by size of company the rank order of nine sources of supply according to the first choice expressed by respondents, the second and third choices combined, and the total of all three choices. One might view the first choice as the source employers prefer to use and the second and third choices as sources to which they will resort to if necessary. In a tight labor supply, such as experienced during the period of this study, one could expect that all three choices would be used as sources for recruiting beginning office and retail workers.

Table 35 is to be read as follows: The first listed source of supply, "Employees already working here," ranked second of nine ranks in being the first choice as a source of recruiting entry workers in companies of from 1 to 3 employees; "Personal reference" was first preference of this size company. Small companies and the second and third choices combined column, "Employees already working here" ranked 6.5 of 9 ranks, and 4 in total of all three choices. In companies of

TABLE 35

Rank Order of Sources of Recruiting 16-21 Year Old Office and Retail Workers

Sources	Rank Order by Size of Company and by Choices																	
	1-3			4-24			25-99			100-499			500 +			Combined		
	Choices			Choices			Choices			Choices			Choices			Choices		
	1	2+3	T	1	2+3	T	1	2+3	T	1	2+3	T	1	2+3	T	1	2+3	T
1. Employees already working here	2	6.5	4	4.5	6	5.5	4	5	5	5	1	1	5	1	2	5	1	1
2. Personal reference	1	2	1	1	1	1	3	2.5	4	6	2	5	7	4	6	6	2	6
3. Ad in a paper	4	3	3	4.5	4	4	5	1	3	2	3	2	3	6	5	3	4	4.5
4. MESC	4	6.5	5.5	3	2.5	2	2	2.5	2	4	4	6	4	3	4	4	3	4.5
5. Private employment agency	4	6.5	5.5	2	5	3	1	4	1	1	7	4	2	5	3	1	6	2
6. Walk-in: Hiring gate personnel office	*	9	9	6	7	7	6	6	6	3	5	3	1	2	1	2	5	3
7. Schools	6	1	2	7	2.5	5.5	7	7	7	8.5	6	7	6	7	7	7	7	7
8. Co-op Work or work experience students	*	6.5	7	8	8	8	8	9	8	7	8	8	9	8	8	8	8	8
9. Present part-time employees	*	8	8	9	9	9	9	8	9	8.5	9	9	8	9	9	9	9	9

*Not reported as used.

4-24 employees, "Employees already working here" ranked 4.5, 6, and 5.5, respectively, for the first, combined second and third, and total choices for recruiting 16-21 year olds.

Guidance counselors and teachers would do well to analyze the foregoing table. In the smaller companies, personal references from a friend, from someone working in the business, or from an outsider are important sources of obtaining office and retail employees. The smallest companies are almost unique in looking to the schools, not as their first choice, but as their second and third choices for recruiting. Middle-size companies (25-499 employees) consider employment agencies, both private and public, to be important sources of supply. Companies of 500 or more employees consider the "walk-in" to be their first and employment agencies as their second source of supply. All sizes of companies consider newspaper advertisements to be of medium importance. The schools (with one exception noted above), cooperative work-study or school work-experience programs, and current part-time employees appear to be the least important sources among all companies in recruiting 16 to 21 year olds for full-time work.

Sources Used in Obtaining Employment by School Leavers

Patterns of sources used by school leavers are shown in Table 36. The company personnel office was not only the most popular source utilized by school leavers, but it was also the source which produced the best results: 53 percent of the persons who used the personnel office and who also reported what happened there said that they secured jobs in this way. The Michigan Employment Security Commission was second in utilization, but only 22 percent of the persons who applied there received jobs. However, another 11 percent were offered jobs through MESC but refused them. The school, while ranking lower than MESC and private employment agencies in terms of usage, ranked second only to the company personnel office in obtaining jobs for persons who did apply there: 36 percent of those using the school in seeking jobs were successful in obtaining them.

TABLE 36

Q. 19. Which Sources Have You Used When Looking For A Job?

Source	Number	Percent
Company Personnel Office	302	72
Mass Media	235	56
Michigan Employment Security Commission	227	54
Private Employment Agency	106	25
School or Board of Education	70	17
Public Employment Agency	45	11
Churches	17	4
Unions	6	1

To those educators who believe the school has an important role in the placement of school leavers, it will be surprising that 25 percent of the school leavers utilized private employment agencies to seek a job.

In Phases 2 and 3, school leavers were asked a question complementary to Q. 19 just discussed: "Q. 5. Would you look at this card and tell me how you found out about your job?" The choices paralleled similar items asked business respondents and reported in Table 35.

School leavers' responses to Q. 5 were totaled for both phases and placed in rank order of importance. These ranks are compared (Table 36) with combined ranks of employers' responses as sources for seeking employees. "Employees already working here" and "Personal reference" were considered as separate choices in interviewing employers. These two were combined in interviewing school leavers; and, in Table 37, comparing the ranks placed on the choices by the two groups, they have also been combined.

TABLE 37

Rank Order of Sources Where School Leavers Sought Jobs and Businesses Sought Employees

Source	Rank Order	
	School Leavers	Businesses
Employees already working there and personal references	1	1
Walk-in at company personnel office	2	3
Private employment agency	3	2
Newspaper advertisement	4	4.5
MESC	5	4.5
"Co-op" student	6	7
Schools	7.5	6
Part-time employees	7.5	8

Inspection alone of ranks between those of school leavers and of employers indicates a high correspondence. A coefficient of rank order correlation (Spearman's Rho) yielded an r of +0.95. Apparently, school leavers seek entry jobs in approximately the same places that businesses look for workers.

Testing Practices for Entry Jobs Reported by School Leavers

Of 333 school leavers employed at the time they were interviewed, 143 in number, or 43 percent, reported taking one or more tests as a part of the hiring procedure. Of 216 school leavers in Phases 2 and 3 who had had an entry job, 78 in number, or 36 percent, reported taking one or more tests.

A larger proportion of those in clerical occupations than all others reported taking tests during the hiring procedure. Of those in full-time employment at the time they were interviewed, 55 percent reported taking one or more tests. Of those who had held an entry job, 58 percent reported taking one or more tests.

Compared to clerical workers, a much smaller proportion of school leavers in sales occupations reported taking tests. Twenty-two percent of those holding retail occupations at the time they were interviewed reported having to take one or more tests, and 24 percent of those holding retail entry jobs reported having to do so.

Types of Tests Reported Taken by School Leavers. In Table 38, types of tests have been grouped: (1) general intelligence tests; (2) aptitude tests including general, clerical, and some miscellaneous types; (3) achievement tests, including general arithmetic, clerical, bookkeeping, and salesmanship; (4) typewriting, including straight copy, rough draft, and other forms of production typewriting; (5) shorthand tests, both dictation and transcription; and (6) other tests not specified.

TABLE 38

Type of Tests Reported Taken by School Leavers in Current and Entry Jobs

Type of Test	Current Job	Entry Job
	Percent (N = 333)	Percent (N = 216)
General Intelligence	24	15
Aptitude	31	16
Achievement	26	13
Typewriting	17	12
Shorthand	5	2
Others (Not Specified)	7	4

Various kinds of aptitude tests, including intelligence, represent the largest proportion of tests reported taken by school leavers, accounting for 50 percent of all tests taken by those to get their current jobs. These plus achievement tests account for 83 percent of all tests taken to obtain current jobs. The proportion is approximately the same for tests reported taken in obtaining entry jobs.

Of all the achievement tests taken, 55 percent of these were arithmetic tests taken by those holding current jobs, and 70 percent, by those reporting tests taken in the entry jobs. None of the school leavers reported taking a salesmanship, retailing, or related type test.

Testing Practices for Entry Jobs in Office and Retail Occupations

To what extent are tests given by companies to select employees for office and retail occupations? The number of companies reporting testing of prospective office and retail employees was averaged for the three phases (Table 39).

TABLE 39

Average Percent of Companies by Size That Test for Office and Retail Occupations

Size of Company by Number of Employees	Percent That Test
1 - 3	26
4 - 24	45
25 - 99	51
100 - 499	56
500+	95

One out of approximately four of the smallest size companies (1-3 employees) test prospective office and retail employees. Ninety-five out of 100 of the largest companies (500 plus employees) test. Of the middle three size companies, approximately half of the companies test with slightly increasing chance of tests being given in the larger of the three sizes of businesses.

Of those companies in the three interview phases who anticipated employing office and/or retail workers in the next six months, respondents were asked to specify the types of tests that applicants would be asked to take. From these responses, the rank order by type of tests that can be expected in different sizes of companies is shown in Table 40.

Typewriting and general aptitude tests are the top ranks except in the smallest companies. Similar to the report of school leavers, of the achievement tests given, arithmetic ranked first among companies of over 25 employees. Sales tests of achievement ranked the lowest with a total of only 7 companies in number in all sizes indicating using such a test. None of the school leavers, it should be recalled, reported taking a sales related achievement test. While aptitude tests ranked first among companies of 500 plus employees, typewriting and achievement tests were a close second and third. The low rank order of shorthand tests indicates that but one portion of the clerical workers applied for stenographic positions.

TABLE 40

Rank Order of Tests Used by Type of Test and by Company Size

Type of Test	Rank Order of Tests by Size of Company				
	1 - 3	4 - 24	25 - 99	100 - 499	500+
Intelligence	3.5	4	3	4	5
Aptitude	2	1	2	2	1
Achievement	1	4	4	3	3
Typewriting	3.5	2	1	1	2
Shorthand	5	4	5	5	4

Of any single kind of achievement test reported given by employers, typewriting headed the list with 37 percent of all sizes of companies reporting some kind of typewriting test. This is at variance with the school leavers' report in which arithmetic headed the list. The school leavers' report, however, included all entry job classifications, not just office and retail classifications as reported by employers.

More businesses reported giving a shorthand test (24 percent) than arithmetic for the same reason. Yet, arithmetic tests ranked high on the list of those given to office and retail job applicants (17 percent).

Screening Practices Used by Employers

Screening practices used as reported by businesses in the employment procedure are shown for all companies reporting by Phases 1, 2, and 3.

TABLE 41

Screening Practices Used for Office and/or Retail Entry Workers

Screening Practices	Companies Using		
	Phase 1	Phase 2	Phase 3
	Percent	Percent	Percent
Application Blank	71	65	55
Informal Talk with Applicant	92	88	98
Formal Interview	56	40	23
Check of Personal and Character References	59	53	41
Check of References from Previous Employers	67	62	39
Check of School References for Grades	19	30	19
Check of School References for Attendance Record	26	8	15
Check of School References for Other	11	27	4
Recommendation by Counselor from School	18	16	13
Recommendation by Teacher from School	7	12	9
Recommendation by Principal from School	12	1	5
Recommendation by "Other" from School	4	0	3
Previous Part-time and Seasonal Employers	0	0	0

Note in Table 41 the relatively low rating of schools and school related sources of information for screening applicants. To be sure, the percents of school resources to be used in screening could be reduced somewhat by disbursing school related resources for information over seven items. Yet, as in the data presented on sources for obtaining entry workers, it is suspected that many employers do not consider the schools and school resources as too important in providing information to screen entry job applicants.

To determine the differences that size of company may make in screening practices, these practices were ranked in order of the 13 practices by each of the five sizes of companies (Table 42). This table is to be read: "Application Blank," the first screening practice listed, was ranked as 4 of 13 ranks by companies of this size; 2.5 by companies with 4-24 employees; 2 by companies with 25-99 employees, etc.

TABLE 42

Rank Order of Screening Practices Used by Size of Companies

Screening Practices	Rank Order by Size of Company				
	Number of Employees				
	1-3	4-24	25-99	100-499	500+
Application Blank	4	2.5	2	1	1
Informal Talk with Applicants	1	1	1	2	4
Formal Interview	5	5	5	4	2
Check of Personal and Character References	3	4	4	5	5
Check of References from Previous Employers	2	2.5	3	3	3
Check of School References for Grades	10	6	6	6	6
Check of School References for Attendance Record	6.5	7	7	7	7
Check of School References for Other	8.5	11	11	9.5	12
Recommendation by Counselor from School	6.5	9	8	8	8
Recommendation by Teacher from School	8.5	11	9	11	9
Recommendation by Principal from School	11	8	10	9.5	10
Recommendation by "Other" from School	12	11	12	12	11
Previous Part-time and Seasonal Employees	-	-	-	-	-

While the application blank was relatively important to companies with from 1 to 99 employees, it was ranked No. 1 by companies of 100 or more employees. Informal talk was of first importance to companies under

100 but was replaced by the formal interview in the largest companies. Check of references from previous employers was of high rank in all sizes of companies, and of considerably higher rank than school related references. Previous part-time or seasonal employees was not used by a single company interviewed as a device for screening applicants.

Summary

Businesses by size vary in their sources for recruiting employees. The small businesses tend toward looking to the personal referral either by present employees or business associates. Large companies look to the "walk-in" as the most important source. Schools are generally a less important source of supply. The pattern of seeking employment by school leavers corresponds to sources businesses used to recruit.

The larger the company, the more likely it is to use tests as a screening device. Ninety-five percent of the largest companies test while only 26 percent of the smallest companies do so.

Application blank and interviews were the most important of all other screening practices used by Detroit businesses. The school sources of information about potential employees generally ranked low.

Section 4

Skills Demanded for Entry Jobs in Office and Retail Occupations

Section 4 deals specifically with the *Dictionary of Occupational Titles* studied in office and retail occupations.

In the first examination, the projected total of 99,509 office and retail occupations will be examined in terms of the rank order of job classifications. The second examination is one of entry occupations requiring or not requring skills. Further analyses will be according to the specific skills demanded.

Division of Office and Retail Jobs by *Dictionary of Occupational Titles*

The rank order and numbers employed in entry jobs by *Dictionary of Occupational Titles* are contained in Table 43.

TABLE 43

Rank Order of and Numbers Hired for Office and Retail Entry Jobs by *Dictionary of Occupational Titles*

DOT Number	Rank	Occupational Title	Numbers Hired	Percent
104,105	1	Clerks, General and General Office	22,066	22
137	2	Typists	16,708	17
170,196	3	Sales Clerks; Sales Clerks, Dry Cleaning and Laundry	7,971	8
175,180, 185,197	4	Salespersons; Salesmen to Consumers; Salesmen and Sales Agents, Except to Consumers; Shoppers	7,514	8
117	5	File Clerks	6,901	7
101	6	Bookkeepers and Cashiers, Except Bank Cashiers	6,545	7

TABLE 43 (continued)

DOT Number	Rank	Occupational Title	Numbers Hired	Percent
123,124	7	Messengers, Errand Boys, and Office Boys and Girls; Telegraph Messengers	6,205	6
118	8	General Industry Clerks	5,343	5
133,137	9	Secretaries and Stenographers	4,752	5
134,138	10	Shipping and Receiving Clerks; Stock Clerks	2,978	3
142	11	Telephone Operators	2,915	3
107,108, 112,126	12	Hotel Clerks, n.e.c.[1]; Insurance Clerks, n.e.c.; Clerks in Trade, n.e.c.; and Correspondence Clerks, n.e.c.	1,750	2
127,128	13	Post Office Clerks; Mail Carriers	1,680	2
157,163	14	Salesmen, Insurance; Salesmen Real Estate	1,342	1
155	15	Canvassers and Solicitors	1,025	1
106	16	Financial Institution Clerks, n.e.c.	1,019	1
		Miscellaneous	2,795	2
		Totals	99,509	100

[1] Not elsewhere classified

The first four ranks account for 55 percent of all entry jobs filled; clerks, general and general office (22 percent); typists (17 percent); sales clerks and sales clerks, dry cleaning and laundry (8 percent); and salespersons, salesmen to consumers, salesmen and sales agents (except to consumers), and shoppers (8 percent). Ranks 5 through 9 account for an additional 30, percent; file clerks (7 percent); bookkeepers and cashiers, except bank cashiers (7 percent) messengers, errand boys, office boys and girls, and telegraph messengers (6 percent); general industry clerks (5 percent); and secretaries and stenographers (5 percent). The miscellaneous DOT's are those in which numbers hired were estimated as less than 1,000 people during the period of the study. They include office machine operators (905 in number); bookkeeping machine operators (652); checkers (501); physicians' and dentists' assistants; paymasters, payroll clerks, and timekeepers; and technical and statistical clerks, agents and appraisers, and clerks and kindred occupations.

Skills Demanded Versus Skills Not Demanded

The surprising fact indicated by the data is the large proportion of entry jobs in which job skills are not required. Data from both business and school leaver respondents are consistent. Forty-eight percent of the business respondents say they do not demand business skills; 43 percent of the school leavers reported that business skills were not demanded in their entry job (Table 44).

TABLE 44

Business Skills Demanded for Entry Jobs in Office and Retail Occupations

Skills Demanded	Business Respondents		School Leavers	
	Number	Percent	Number	Percent
One or More	51,403	52	816	57
None	48,106	48	612	43
Totals	99,509	100	1,428	100

There is a wide divergence by various occupational titles within the office and retail field of skills not demanded. By job titles, the range is from 1 to 98 percent of the jobs within a particular DOT classification that do not require skills. In Table 45, DOT classifications are ranked from highest to lowest percentage of jobs not demanding skills.

TABLE 45

Rank Order of Office and Retail Entry Jobs for Which Employer does Not Demand Business Skills (*Dictionary of Occupational Titles*)

DOT Number	Rank	DOT Title	Total Number of Entry Jobs	Total Number Not Demanding Skill	Percent Not Demanding Skill
127,128	1.5	Post Office Clerks; Mail Carriers	1,680	1,644	98
157,163	1.5	Salesmen Insurance; Salesmen Real Estate	1,342	1,322	98
103	3.5	Shipping and Receiving Clerks; Stock Clerks	2,978	2,856	96
134,138	3.5	Checkers	501	480	96
170,196	5	Sales Clerks; Sales Clerks Dry Cleaning and Laundry	7,971	7,431	93
175,180	6	Salespersons; Salesmen to Consumers; Salesmen and Sales Agent Except to Consumers; Shoppers	7,514	6,854	91
135,136, 148,149	7	Technical Clerks, n.e.c.; Statistical Clerks and Compilers; Agents and Appraisers, n.e.c.; Clerks and Kindred Occupations	169	150	89
107,108, 112,116	8	Hotel Clerks, n.e.c.; Insurance Clerks, n.e.c.; Clerks in Trade, n.e.c.; Correspondence Clerks	1,750	1,356	78
117	9.5	File Clerks	6,901	4,692	68
142	9.5	Telephone Operators	2,915	1,974	68
132	11	Physicians' and Dental Assistants and Attendants	360	240	67

TABLE 45 (continued)

DOT Number	Rank	DOT Title	Total Number of Entry Jobs	Total Number Not Demanding Skill	Percent Not Demanding Skill
123,124	12.5	Messengers, Errand Boys and Office Boys and Girls; Telegraph Messengers	6,205	3,772	61
101	12.5	Bookkeepers and Cashiers Except Bank Cashiers	6,545	3,982	61
106	14	Financial Institution Clerks, n.e.c.	1,019	612	60
118	15	General Industry Clerks, n.e.c.	5,343	3,145	59
102	16	Bookkeeping Machine Operators	652	342	52
126	17	Paymaster, Payroll Clerks, and Timekeepers	208	81	39
104,105	18	Clerks, General and General Office	22,066	6,788	31
125	19	Office Machine Operators	905	184	20
137	20	Typists	16,708	201	1
155	21.5	Canvassers and Solicitors	1,025	0	0
133,137	21.5	Secretaries, and Stenographers	4,752	0	0
		Totals	99,509	48,106	48

Entry job classifications in which 90 percent or more of the total jobs do not require one or more skills account for 22 percent of the total office and retail occupations filled. They are: post office clerks, and salesmen, insurance, and real estate (both 98 percent); shipping and receiving clerks, stock clerks, and checkers (96 percent); sales clerks, general and dry cleaning and laundry (93 percent); and salespersons, salesmen, sales agents except to consumers, and shoppers (91 percent).

Those entry jobs classifications in which one or more skills are demanded in 60 percent or more of the jobs account for 46 percent of all of the office and retail jobs filled. They are: paymasters, payroll clerks, and timekeepers; clerks, general and general office; office machine operators; typists; canvassers and solicitors; and secretaries and stenographers.

Specific Skills Required for Office and Retail Occupations

Table 46 is arranged in rank order of business skills demanded for entry jobs by employers. Two ratios are provided: (1) a ratio of the number of jobs demanding the specific skill to the total number hired for office and retail entry jobs in the Detroit labor market and (2) a ratio of the number of jobs demanding the specific skill to the total number of jobs in which one or more skills are required.

TABLE 46

Business Skill Required by Employers for Office and Retail Entry Jobs

Skills Specified	Rank	Number	Ratios	
			No. ÷ Total Jobs (N=99,509)	No. ÷ Jobs Demanding Skills (N=51,403)
Typewriting	1	43,577	44	85
Shorthand	2	6,413	6	12
Business Machine	3	5,890	6	12
Bookkeeping and Accounting	4	3,211	3	6
General Business	5	2,628	3	5
Office Practice	6	1,947	2	4
Business Mathematics	7	1,508	2	3
Filing	8	1,185	1	2
Data Processing	9	385	-	1
Retailing	10	265	-	1
Business English	11	140	-	-
Sub-Total		67,149	68	131
No Answer		192	-	-
Total		67,341	68	131

Typewriting skill is required in 44 percent of the entry jobs. However, of the entry jobs in which one or more skills are demanded, 85 percent of these jobs demand typewriting ability. Shorthand and business machines rank second and third with these skills required in 6 percent of all entry jobs or in 12 percent of the entry jobs in which one or more skills are demanded.

Note that these latter skills are demanded about one seventh as often as typewriting. The kinds of business machines for which skills are required are not to clear. Yet, from the specific skills demanded of office machine operators, 371 of the jobs demanded data processing. It is suspected that other of the machine skills demanded is related to data processing equipment.

A word should be said about the word "skill" as used here. The interviewers and coders tended toward identifying "skills" as the outcome of specific high school courses. The classification used tends toward an identification of curriculum courses. Thus, "Business English" identified an area of skills in oral and written communication. Of course, the coding of interview responses caused some distortion of skill classification, too. For example, 840 in number of canvassors and solicitors, or 82 percent, were coded as demanding office practice because telephone technique in telephone solicitation was the skill required. And 240 salespersons (DOT's 175, 180, 185, 197) were coded as requiring "shorthand" instead of "shop" skills. This latter error was corrected.

Information similar to that from business respondents was also obtained from school leavers in Phases 2 and 3. Expanded to the universe of June, 1963, school leavers, skills demanded in entry jobs are displayed in Table 47.

By classifying and ranking the skills that business respondents demand in the same way as school leavers identified skills, a perfect correspondence of rank orders is obtained (Table 48).

TABLE 47

Specific Business Skills Demanded of Office and Retail Entry Job Holders[1]

Skills Specified	Rank	Number	Percent of Jobs N = 1,428	Percent of All Skills N = 816
Typewriting	1	600	42	74
Other business skills (than typing, shorthand, and business machines)	2	264	18	32
Shorthand	3	156	11	19
Business Machines	4	72	5	9
Retail Education	5	36	3	4
Sub-Total		1,128	79	138
No Answer		48	3	6
Total		1,176	82	144

[1] Figures have been expanded to the universe of school leavers using a factor of 12:1. This factor was used for the information came only from Phases 2 and 3.

TABLE 48

Rank Order of Skills Demanded by Businessmen and Found Required by School Leavers

Specified Skills	Business Respondents	Rank Order School Leavers
Typewriting	1	1
Other business skills (all other than typing, shorthand, business machine)	2	2
Shorthand	3	3
Business Machines	4	4
Retail Education	5	5

Skill of Typewriting in Entry Jobs. Typewriting ranked first as the most frequently required skill in 13 office and retail occupations; second in 8; and third in 1 job classification. Typewriting was not required in but two of the total number of job classifications included in office and retail occupations: not required of salesmen, insurance and real estate or of sales clerks and sales clerks in dry cleaning and laundry.

Ratio of Skills Demanded by *Dictionary of Occupational Titles*

The total number of jobs divided into the total number of skills required for that job provides a ratio of skills per job. Table 49 is arranged in rank order of the ratio of skills per job.

TABLE 49

Rank Order of Ratio of Job Skills to Number of Jobs for Office and Retail Entry Jobs by *Dictionary of Occupational Titles*

DOT Number	Rank	Title	Ratio of Skills to Jobs 1:2	Total Skills (1)	Total Jobs (2)
133,137	1	Secretaries and Stenographers	1.96	9,309	4,752
137	2	Typists	1.14	19,009	16,708
155	3	Canvassers and Solicitors	1.01	1,030	1,025
104,105	4	Clerks, General and General Office	.99	21,780	22,066
125	5	Office Machine Operators	.94	847	905
102	6	Bookkeeping Machine Operators	.87	568	652
126	7	Paymaster, Payroll Clerks, and Timekeepers	.62	128	208
106	8	Financial Institution Clerks, n.e.c.	.60	608	1,019
107	9	Bookkeepers and Cashiers, except Bank Cashiers	.51	3,330	6,545
118	10	General Industry Clerks	.46	2,468	5,343
123,124	11	Messengers, Errand Boys, Office Boys and Girls; Telegraph Messengers	.41	2,524	6,205
117	12	File Clerks	.35	2,418	6,901
142	13	Telephone Operators	.34	981	2,915
132	14	Physicians' and Dentists' Assistants and Attendants	.33	120	360
107,108, 112,116	15	Hotel Clerks, n.e.c.; Insurance Clerks, n.e.c; Clerks in Trade, n.e.c.; and Correspondence Clerks, n.e.c.	.24	414	1,750

TABLE 49 (continued)

DOT Number	Rank	Title	Ratio of Skills to Jobs 1:2	Total Skills (1)	Total Jobs (2)
135,136, 148,149	16	Technical Clerks, n.e.c.; Statistical Clerks and Compilers; Agents and Appraisers, n.e.c; Clerks and Kindred Occupations	.22	38	169
175,180, 185,197	17	Salespersons; Salesmen to Consumers; Salesmen and Sales Agents except to Consumers; Shoppers	.12	900	7,514
170,196	18	Sales Clerks; Sales Clerks, Dry Cleaning and Laundry	.08	660	7,971
103	19.5	Checkers	.04	21	501
134,138	19.5	Shipping and Receiving Clerks; Stock Clerks	.04	122	2,978
127,128	21	Post Office Clerks; Mail Carriers	.03	46	1,680
157,163	22	Salesmen, Insurance; Salesmen, Real Estate	.01	20	1,342
		Totals	.68	67,341	99,509

Secretaries and stenographers rank number one in skill ratio requiring two skills per job. Typists rank second, requiring 1.1 skills for each job in this category. Salespersons, salesmen to consumers, salesmen and sales agents except to consumers, shoppers; sales clerks, general and dry cleaning and laundry; checkers; shipping and receiving and stock clerks; post office clerks, mail carriers, and insurance and real estate salesmen are at the bottom of the list of skills demanded.

Skills Demanded by Specific Job Titles

Compilations of skills demanded in each of the Dictionary of Occupational Titles classifications filled by Detroit businesses in office and retail entry jobs are contained in Appendix H.

Five specific examples are considered here as especially important to school people (Tables 50 to 54).

Table	DOT	Job Titles
50	133,137	Secretaries and Stenographers
51	104,105	Clerks, General and General Office
52	137	Typists
53	175,180, 185,197	Salespersons, Salesmen to Consumers, Salemen and Sales Agents Except to Consumers, and Shoppers
54	107,196	Sales Clerks, General and Dry Cleaning and Laundry

TABLE 50

Secretaries; Stenographers
DOT 133,137

Entry Job Skill Requirements

Skill Required	Number	Percent	Skills Specified	Rank	Number	Percent (N= 4,752)
One or More	4,752	100	Typewriting	1	4,719	99
None	-	-	Shorthand	2	4,552	96
			Business Machines	3	38	1
Total	4,752	100				
			Total		9,309	196

Again, the highest ratio of skills required is in the stenographer, secretary job classifications (Table 50). However, only three different kinds of skills are required: shorthand, typewriting and business machines.

TABLE 51

Clerks, General and General Office
DOT 104, 105

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=15,278)
One or More	15,278	69	Typewriting	1	14,621	96
None	6,788	31	Bookkeeping and Accounting	2	2,218	14
Total	22,066	100	Business Machines	3	2,108	13
			Shorthand	4	1,530	10
			Office Practice	5	490	3
			Filing	6	433	3
			Business English	7	120	1
			Business Mathematics	8	100	1
			General Business	9	28	0
			Sub Total		21,648	141
			No Answers		132	1
			Totals		21,780	142

TABLE 52

Typists
DOT 137

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=16,507)
One or More	16,507	99	Typewriting	1	16,420	99
None	201	1	Business Mathematics	2	1,200	7
Total	16,708	100	Business Machines	3	675	4
			Office Practice	4	286	2
			Filing	5	228	1
			Bookkeeping and Accounting	6	200	1
			Totals		19,009	114

General office clerks, probably because of the diversity of general clerical work, have up to nine different skills required. Typists require six different skills. That typewriting is not demanded of 1 percent of the "typists" may mean either that a few typing jobs require a "hunt and peck" level of skill or that interviewing or coding errors cause the discrepancy.

TABLE 53

Salespersons: Salesmen, to Consumers; Salesmen and Sales Agents
Except to Consumers; Shoppers
DOT 175, 180, 185, 197

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=660)
One or More	660	9	Business Machines	2	240	36
None	6,854	91	Typewriting	2	240	36
Totals	7,514	100	Shop	2	240	36
			Retailing	4	180	27
			Total		900	135

TABLE 54

Sales Clerks; Sales Clerks, Dry Cleaning and Laundry
DOT 170, 196

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=540)
One or More	540	7	Business Machines	1	540	100
None	7,431	93	Business Mathematics	2	120	22
Totals	7,971	100	Total		660	122

Perhaps the most significant fact about the last two tables (Tables 53 and 54) is the high percent of sales jobs not demanding any job skills.

Summary

Clerks, general and general office; typists; sales clerks; and salespersons account for 55 percent of the office and retail DOT job classifications filled by Detroit businesses.

Forty-three percent of all office and retail entry jobs required no skills; 57 percent did require one or more.

The DOT's requiring the least number of skills were post office clerks and mail carriers; insurance and real estate salesmen; shipping, receiving and stock clerks; checkers; and sales clerks and salespersons. Ninety percent or more of the jobs in these office and retail areas did not demand one single skill.

Forty-six percent of all office and retail jobs had 60 percent of the jobs in which at least one or more skills were demanded.

Typewriting was demanded in 44 percent of all entry jobs and in 85 percent of all entry jobs that required one or more skills.

The DOT's requiring an average of one or more skills per entry job were secretaries and stenographers; typists, and canvassers and solicitors. General clerks required as many as nine different skills.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The focus of this study has been on the determination of the number and types of entry jobs available to high school leavers in Detroit, and the concomitant skills demanded by the employer as a prerequisite for hiring. Particular attention has been given to the office and retail occupations available to 16-21 year olds with no previous full-time work experience.

Data were collected from two primary sources--employers in Detroit and school leavers from the Detroit Public Schools' Class of 1963. All data were collected through the use of professional interviewers. Where appropriate, comparisons were made between the findings from each of the universes.

These data will provide appropriate school personnel, in Detroit and elsewhere, the basis for making curriculum changes in business and distributive education offerings. They will also provide other education personnel with factual information concerning job opportunities and requirements in a metropolitan area--information which should raise serious questions about the present and projected high school vocational education programs.

The first three chapters of this report have presented the purposes, procedures, and findings for the study. Chapter 4, presents the basic conclusions and recommendations which seem appropriate from selected findings. Each conclusion is preceded by a citation to a supportive finding and is followed, where appropriate, by a recommendation.

FINDING 1

Four percent of all Detroit companies (100 or more employees) account for 55 percent of all office and retail jobs secured by 16 to 21 year olds. In all three phases of employer interviews, over 90 percent of the companies with over 500 employees had entry jobs available. Only 22 percent of the smallest companies, on the other hand, had entry jobs available. In other words, the odds are 1 out of 4 that employers of less than 25 employees will hire 16-21 year olds. The smaller the company, the more likely employers are to hire for other than office or retail jobs; the larger the company, the more likely they are to hire for office or retail jobs.

Conclusion 1

There is a direct relationship between the size of the company and the number of entry jobs available for 16-21 year olds with a high school education are less. The larger the company, the more likely they are to have entry-type jobs available.

The assumption that small companies (less than 25 employees) are a major source of entry jobs for office and retail employees is not supported by the findings.

Recommendation 1

Those responsible for planning job-oriented curriculums should look toward the larger companies in determining job needs for the office and retail occupations.

FINDING 2

Thirty-eight percent of the 35,091 Detroit businesses stated they had entry jobs that could be filled by 16-21 year olds. A significantly lower percent of these same companies, 26 percent in July, 1965, indicated a disposition to hire this age group. However, only 19 percent did, in fact, hire during the six-month period preceding July 1, 1965. Furthermore, only 10 percent of all the Detroit companies hired 16-21 year olds for office or retail jobs.

Conclusion 2

The fact that in 1965, a period of unprecedented economic activity, 62 percent of all businesses in Detroit stated they did not have jobs that could be filled by an inexperienced high school leaver, raises serious questions about the future opportunities for 16-21 year-old youth to enter the world of work.

Recommendation 2

A study should be initiated to determine if those businesses that have not hired 16-21 year olds could, in fact, have employed this age group if it had been properly trained in high school.

FINDING 3

Approximately two-thirds of all entry jobs filled in office and retail occupations were in two Standard Industrial Code Research Categories: 1) retail trade; and 2) finance, real estate, and insurance.

Conclusion 3

The odds are two out of three that high school leavers will find entry office or retail jobs in retail trade or finance, real estate, and insurance-type businesses.

Recommendation 3

Analyses of current entry jobs in retail trade and in finance, real estate, and insurance should provide a base for curriculum innovation, since these types of businesses account for so many entry jobs.

FINDING 4

Fifty-four percent of all entry jobs were accounted for in clerical and sales Dictionary of Occupational Titles classifications: 44 percent clerical and 10 percent sales.

Conclusion 4

Data from both the school leaver and the employers support the conclusion that more entry jobs are available in the office and retail fields than all other occupational fields combined. Consequently, vocational business education programs at the high school level should receive support in relation to the size of the population served.

Recommendation 4a

All school personnel should be informed of and recognize the importance of office and retail classifications as defined by the Dictionary of Occupational Titles as an avenue for entry jobs.

Recommendation 4b

Administrators of vocational education should provide proportionate financial support for clerical and sales occupations in which more than 50 percent of the entry jobs are filled.

FINDING 5

In the fiscal year ended June, 1965, 36 percent of all entry jobs filled in Detroit were in unskilled (25 percent) and semiskilled (11 percent) occupations. This 36 percent was a significant increase over the average of the preceding two years (22 percent).

Conclusion 5

More than one-third of all entry jobs filled in Detroit during the year ended June, 1965, did not by definition require formal high school-vocational preparation.

Recommendation 5a

Again, this conclusion supports the previous recommendation (4b) concerning the allocation of vocational education funds at the high school level.

Recommendation 5b

A study should be initiated to analyze the stability of semiskilled and unskilled DOT's entry jobs to assess the transitional role they play in moving the 16-21 year olds toward permanent careers.

FINDING 6

In the fiscal year ended June, 1965, 12 percent of all entry jobs were in service occupations. During the years of the study, service occupations averaged 15 percent of all 16-21 year olds hired.

Conclusion 6

Service occupations are not proving to be the "bright hope of the future." During the period covered by this study, service occupations did not provide the number of entry jobs that other sources have indicated.

Recommendation 6

A clear distinction should be made by and for school personnel responsible for vocational curriculum development between service-type businesses and service occupations. For example, the practice of one vocational group reporting enrollments by SIC census and all other vocational groups by DOT classification adds to the confusion.

FINDING 7

An average of 19 percent of school leavers of 1963 had not held a full-time job. Furthermore, 5 percent of the class had not experienced even a part-time job. Fifty-five percent of all school leavers had obtained a full-time job within six months after graduation.

Conclusion 7

A hard core of unemployed school leavers appears to be developing in the Class of 1963 school leavers.

Recommendation 7a

Since only 10 percent of all Detroit businesses did hire 16-21 year olds for office and retail jobs during the last phase of this study, business and industry should reassess personnel policies as applied to employing the inexperienced high school leaver in these areas.

Recommendation 7b

An intensive study should be made of the subsample of unemployed from the Class of 1963 to determine the critical educational requirements that would have enabled them to secure entry employment.

FINDING 8

More 16-21 year olds lost their jobs for incompetence and inability to do the job than for any other reason. Inability to get along with people accounted for one-third of the reasons for dismissal.

Conclusion 8

In this age group, inability to get along with people is not the major cause of dismissal, as has been reported in most other studies. More emphasis needs to be placed on preparing the student with adequate vocational skills (including reading, writing, and spelling); and at the same time, on stressing an appreciation of his responsibilities to the employer.

Recommendation 8

Employers should be encouraged to state more specifically the reasons they discharge workers from entry jobs. An attempt should be made to collect a series of specific instances of dismissal. These should be used by school personnel in preparing young people to secure employment.

FINDING 9

Of 43 "co-op" students in the sample, 95 percent had had an entry job, compared to 79 percent of the other school leavers. The difference was significant above the .02 level. However, of the current full-time jobs held at the time of interview, there was not a significant difference at the .05 level as between "co-ops" and the rest of the school leaver sample.[1]

Conclusion 9

The "co-op" work study program appears effective in helping students obtain an entry job but does not necessarily help students in retaining full-time employment.

Recommendation 9a

To improve the "co-op" work study program, greater effort of coordinators should be placed on activities related to employment retention. In other words, the objective of students should be placed not only on how to get the initial job but also on how to retain it and grow in it.

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[1] The current co-op enrollment in office and Distributive Education while seemingly large (2,300 office) comprises less than 23 percent of the current graduating class; thus it makes less impact than it could because it is not known by many companies. Approximately 600 employers use office co-ops in Detroit out of the potential 35,000 companies in the universe of the study.

Recommendation 9b

Steps should be taken to provide "co-op" opportunites to all vocational office and retail students.

FINDING 10

"Co-op" work study, sex, race, and the combined factors of sex and race, were significant influences on whether a school leaver had held an entry job. "Co-op" was the most positive factor in determining whether a school leaver secured a job. Being a female Negro was the most negative factor in determining that a school leaver did not secure a job.

Conclusion 10

Females generally have a more difficult time obtaining an entry job than do males. Female Negroes have more difficulty obtaining jobs than do any other group. It has been generally assumed that male Negroes have more difficulty in obtaining entry jobs than do male whites. The findings in this study do not support this belief for the school leavers from the Class of 1963.

Recommendation 10

Depth interviews should be conducted with female Negroes who have never been employed full time and who are seeking work. This is to determine what action might be taken with future classes of Detroit School leavers to eliminate the waste of human resources.

FINDING 11

School leavers' intelligence ratings play an important role in determining the type of occupation in which they will find their entry job.

Fifty-four percent of the high-intelligence group entered clerical occupations. However, only 17 percent of the low-intelligence group entered this occupational area. In the retail occupations the situation is reversed: Only 5 percent of the high-intelligence group went into retail occupations; while 17 percent of the low group did so.

Conclusion 11

Clerical occupations appeal to a higher-intelligence group than is commonly believed by most school personnel--especially counselors. Low intelligence may be a factor that excludes school leavers with business training from entering the clerical occupations. The school personnel responsible for administering, counseling, and teaching in the vocational business subjects should reassess their beliefs concerning intelligence needed for clerical jobs.

Recommendation 11

Low-intelligence students should not be encouraged to enter an office education curriculum, since a small proportion of them will secure office jobs.

High-intelligence students should not be counseled out of an office curriculum, since a high percentage of them secure office jobs.

FINDING 12

According to the total employer responses, schools and "co-op" work or other work experience programs ranked seventh and eighth of nine ranks as sources of recruiting 16-21 year olds. Of eight sources used by school leavers in seeking a job, school ranked fifth among all sources used. Yet, in actually helping 16-21 year olds obtain a job, school ranked second only to the personnel office. In students' current job, "co-op" work and schools ranked 6 and 7.5 respectively out of eight ranks.

Conclusion 12

Employers do not consider the school as an important source for seeking office and retail employers; school leavers do not consider the schools as an important resource for seeking employment.

Recommendation 12a

Guidance personnel, office and retail teachers, and co-ordinators need to cooperate during a student's senior year to (a) teach job seeking skills, (b) develop a personal data file, (c) provide businesses with a brief of qualifications or people leaving school, (d) provide improved job counseling, and (e) cooperate with public employment agencies in testing job seekers and in exchanging information to aid beginning job seekers.

Recommendation 12b

A centralized school placement office should become a focal point from which businesses would be willing to seek beginning employees. This is in contrast to having businesses contact 21 different schools to make their job needs known.

FINDING 13

Fifty-five percent of school leavers employed in clerical occupations reported taking one or more tests; 22 percent of those in retail occupations so reported.

Conclusion 13

Testing at personnel offices is a relatively important screening device used by businesses in seeking employees.

Recommendation 13a

Duplication of testing effort should be eliminated through a central clearing house (such as the school) and with the consent of the job seeker such information made available to employers.

Recommendation 13b

To supplement school test information for employment purposes, schools should encourage the Employment Securities Commission of the Department of Labor to enter the school to administer the General Aptitude Test Battery and similar aptitude tests. Such service available to employers would cause them to look more frequently to the schools as a source of information and help in seeking employees.

FINDING 14

Aptitude tests, including intelligence, accounted for 50 percent of all tests reported by school leavers in obtaining their jobs. Another 33 percent were classified as general achievement tests with more than half of these reported as arithmetic tests. Of those companies seeking clerical employees, 37 percent reported giving a typewriting test. None of the school leavers, and only 3 percent of the businesses, reported taking or using a sales test.

Conclusion 14

General intelligence and other aptitude and achievement tests are those employed by businesses which test.

Recommendation 14

In curriculum revision, a greater emphasis on basic skills of arithmetic and communication appears to be warranted. This recommendation is based on the emphasis in testing applicants in arithmetic and other general achievement areas.

FINDING 15

Twenty-six percent of the smallest companies reported using tests; 45 percent, 51 percent, and 56 percent of the three middle-size companies so reported; 95 percent of the largest companies reported using tests.

Conclusion 15

Testing procedures are utilized most often in the large companies. Less emphasis is placed on tests by small- and medium-size companies.

Recommendation 15

Part of the preparation for employment should be "test sensitivity training" with a variety of aptitude and achievement tests taken while in school--not for grading purposes but for learning how to take tests.

FINDING 16

In companies of more than 100 employees, the application blank ranked first; with the interview, formal or informal, ranked second of 12 screening devices. Among the small companies (1-3 employees) informal interview and references from previous employees ranked first and second. School sources of information were relatively unimportant, accounting for the lowest rank of 12 screening devices.

Conclusion 16

The application blank and interview, formal or informal, are two of the most frequently used forms of screening employees.

Recommendation 16a

Job preparation must include specific preparation in learning to complete a variety of job application forms.

Recommendation 16b

Job preparation should include a variety of mock employment interviews.

FINDING 17

General office clerks accounted for 22 percent of all office and retail entry jobs filled; typists, 17 percent; sales clerks and sales clerks in dry cleaning and laundry, 8 percent; sales persons, salesmen to consumers, salesmen and sales agents (except to consumers) and shoppers, 3 percent.

In ratio of skills required to jobs available, secretaries and stenographers ranked first with 1.96 skills demanded per job; typists, 1.1; canvassers and solicitors 1.0; general office clerks, .99.

Conclusion 17a

Typists and general office clerks, the top two office and retail jobs in terms of number hired, ranked high in the ratio of skills required to jobs available.

Conclusion 17b

Stenographers and secretaries, which required the highest ratio of skills per job, did not account for a great number of entry jobs.

Conclusion 17c

Sales and sales related positions are among the lowest job classifications in terms of skill demands.

Recommendation 17a

In terms of the number of jobs and skills required, preparation for general office clerks and typists should be high priority areas in the Detroit Business Education curriculum.

Recommendation 17b

With only 5 percent of the office and retail jobs listed as secretary and stenographer DOT's, and in view of the high proportion of skill demands, it is recommended that careful screening should be exercised when admitting students to this preparatory program.

Recommendation 17c

In view of the low skill requirements, careful analysis should precede any curriculum devoted to the preparation of sales and sales-related personnel.

FINDING 18

Forty-four percent of all office and retail jobs demanded the skill of typewriting. Of all jobs demanding one or more skills, 85 percent demanded typewriting. Typewriting ranked first as the most frequently required skill in 13 office and retail occupations; second, in 8; and third, in 1. Only two entry job classifications in office and retailing did not have typewriting demanded of some workers.

Conclusion 18

Typewriting is the one skill that is generally required of office and retail entry job applicants.

Recommendation 18

Typewriting would appear to be the one single skill that should probably be supplied to all office and retail job seekers. The context of typewriting courses and other job related instruction should be analyzed and taught in terms of job needs.

In summary form, the following statements stand out as the major findings and conclusions of the study:

1. There is a high rate of unemployment in the 16-21 year age group.
2. Job turnover among school leavers is relatively high with more than two-fifths reporting holding more than one full-time job.
3. Nine out of ten Detroit business do not employ school leavers for entry office and retail jobs.
4. Few business "skills," as the term is used in this study, are demanded as a prerequisite for employment in office and retail jobs.
5. The schools are not considered as an important source for recruiting and screening 16-21 year olds.
6. Typewriting was the one single business skill most often required in an entry office and retail job.
7. Above average aptitudes as represented by intelligence tests are possessed by a high proportion of those entering the clerical field.
8. Sex and race were the most significant influences in Negro females not obtaining an entry job.

9. Both sex and race are significant influences in the type of entry job obtained by school leavers.
10. Retail selling jobs demand few skills.
11. "Co-op" work experience was a positive influence for entrance into full-time employment.

Needed Research

The findings and conclusions cited are at the heart of a social problem much broader and deeper than can be solved by school people alone. Indeed, these facts are at the heart of numerous governmental actions--local, state, and federal--designed to have an impact on the instability of initial employment or unemployment of youth. Yet, as great as the problem is, our concern here is that the school be as effective an agent as posible in helping youth get and hold jobs.

Two courses of action are open to the school: (1) the playing of hunches in innovative programs; (2) the development of additional tools to measure what employers need in terms of what schools can teach and what school leavers then have to offer in competence.

Innovative programs are needed to narrow the bridge between what employers want in 16 to 21 year olds entering the labor market and what they get (or now refuse) from schools' vocational programs. Such an action program is that envisioned in Phase II of the current study. As a Senior Intensified Program[1] to be tested, the project holds out the hope of decreasing the time of preparation for those entering office and retail occupations while increasing the time for their general education. Other innovative programs are now in the offing. These programs are necessary and must be done now to try to alleviate some of the current problems.

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[1] A 3-year demonstration project funded by the United States Office of Education Grant Number OEG 3-061968-1993

Yet, in the long run, additional tools will be needed for matching entry jobs with school leavers prepared to obtain and retain those jobs. And these tools will extend beyond the classification system imposed by SIC or DOT, or imposed by curriculum course titles. We offer these suggestions as next steps in finding the needed tools of study:

1. Extension of the tool of job analysis to the affective domain. Such an extension would perhaps provide models of the effective office and retail worker, level of aspiration, self-image, and similar "feeling side" of jobs to judge employment needs with the capabilititities of school leavers.
2. Determination of the critical requirements of job clusters in the office and retail areas and the commonality among many occupations that now cross several fields of occupations.
3. The final tool is one originally projected for the current study--the development of a job barometer. This portion of the study, you will remember, was ruled out because of time and money. Yet, a job barometer that does accurately reflect the changing tasks to be performed in jobs by 16 to 21 year olds and their requirements both cognitive and affective is needed; but such a barometer will have to use more sensitive ingredients than SIC, DOT's, or current curriculum course titles.

APPENDIX A

ORIGINAL PROPOSAL

Proposal No. 2378

Appendix A

PROJECT TITLE: Opportunities and Requirements for Initial Employment of School Leavers With Emphasis on Office and Retail Jobs

A JOINT PROJECT SUBMITTED BY: Wayne State University and University of Michigan in cooperation with the Detroit Public Schools

SUBMITTED BY: Wayne State University

ADDRESS: Detroit 2, Michigan

TELEPHONE NUMBER: TEmple 3-1400

INITIATED BY: Jeanne Reed, Chairman, Research Committee, Business Teachers' Club of Metropolitan Detroit

PROJECT DIRECTOR: Fred S. Cook, Chairman of Business and Distributive Education, Wayne State University

TRANSMITTED BY: Clifford H. Van Buskirk, Grant and Contract Officer, Wayne State University

FISCAL OFFICER: Garbis H. Chamian, Chief Accountant, (Extension 7100)

DATE: August 5, 1963

REVISED: December 19, 1963

STATEMENT OF THE PROBLEM

This proposal is concerned with the full employment of youth by business and industry. Shifting job requirements brought about by technological changes have given rise to an imbalance between needs of business and the high school curricula. There is a need for an accelerated modification of the curricula to compensate for this imbalance. However, there is a lack of statistically valid data upon which to recommend significant revision of the curricula for preparation of youth for the world of work. The use of survey research procedures to develop an entry-job[1] index will provide the information required for a minimal attack of the problem.

Three kinds of information will be required:

First, more precise knowledge must be secured about the specific skills required for the various entry jobs. An inventory must be made of the skills required for each entry job.

Second, more precise knowledge must be secured concerning the experiences high school leavers[2] (graduates and drop-outs) have as they attempt to enter the labor market. What is the relationship between their high school training and their entry occupation? What types of entry jobs do high school leavers secure?

Third, more precise knowledge must be secured concerning the relationship between the number and types of entry jobs available and the experiences of high school leavers as they enter the world of work. An inventory must not only be made of the skills required for each entry job, but, in addition, an estimate of demand must be made by predicting the proportion of the total high school output that will be required by business and industry within each entry job classification.

The shifting requirements of business and industry must be anticipated in time to make changes in high school courses. The basis for modifying high school courses should be shifted from present job description categories to current entry-job requirements. One of the primary purposes of this study will be to determine which of the three survey time intervals provides the best data for the development of a valid index of changing entry-job opportunities as reflected in the experiences of potential employers and entry job employees.

Several aspects of this proposal make it unique in comparison to previous research in this topic. In the first place, no previous studies have been found that reported the specific entry jobs available in a given community. Nor have previous studies reported the specific skills demanded by employers for those jobs available to high school youth with no previous full-time employment. This project will provide business, education, and other interested groups current factual data for planning purposes.

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[1] "Entry-job"--the first full-time job of a school leaver (graduate or drop-out), minimum of 35 hours per week and hired on a permanent basis with no previous full-time experience in a related field.

[2] High School Leavers--are defined as graduates or drop-outs.

Another unique aspect of this study is its emphasis on continuing investigation of employment opportunities as well as continuing follow-up of school leavers.

Previous surveys have been one-shot projects that have not explored the possibilities of continuing modifications in the labor market and the implications of these modifications on the preparation of youth for the world of work. The rapidity of change in business methods has created the demand for a corresponding flexibility within the schools.

A third, unique aspect of this study is the intent to develop an index of changing entry job opportunities through the utilization of data collected from the employing community and school leavers. This "index" will capitalize on both of the above unique features and furnish education with current factual data. These data will enable the schools to decrease the educational lag in a rapidly changing society. It will also enable the schools to make necessary curricula modifications in sufficient time to meet the needs of the majority of the school leavers.

Finally, the application and refinement of sampling and interviewing techniques to this specific problem will provide researchers in other communities the bases for developing similar indices and for making necessary curricula changes.

Historical Note

This proposal was originally submitted to the United States Office of Education on February 1, 1963 and was assigned Project Number [illegible]. The reviewing panel recommended that the proposal be revised and resubmitted.

The following changes have been made:

1. The statement of the problem was revised and refined.
2. The complete sampling procedures were revised in an effort to achieve the same precision at a reduced cost.
3. The budget has been changed from [illegible] in Federal Funds for the original proposal, to [illegible] in Federal Funds for the revised proposal.
4. Consultant help was used in developing these revisions and we are indebted to members of the office staff of the Cooperative Research Branch for many constructive suggestions.

DISCUSSION OF THE PROBLEM

In Detroit as in other places, there are many skilled workers whose occupations are being changed by automation and other technological developments. It has been assumed that these changes have affected the number and type of entry jobs. There is evidence that youth who have not developed their skills constitute a major portion of the "hard core" of unemployed. Consequently, questions are being raised about the development of special skills to meet the changing job opportunities for high school leavers.

Most of the talent studies to date have been concerned with the exceptional student. Little research has been done concerning needs of the office and retail occupations. Yet, this segment of the high school curriculum accounts for approximately one-third of the total high school enrollment. In fact, there are more students enrolled in this curriculum than any other in the Detroit high schools, with the exception of English. Furthermore, it provides one of the few opportunities for high school students to secure entry jobs in occupations requiring special training. Therefore, it seems appropriate to ask what skills mark a youngster as being talented for this changing job market.

The Michigan Employment Security Commission and other government agencies have, for example, data relative to the number of clerical and kindred workers, currently employed, as well as projected employment. They have not, however, determined the specific entry jobs, nor the skills needed by inexperienced high school students to secure the entry office and retail jobs.

This proposal is part of a longer project consisting of two phases. Phase 1 of the study will provide data periodically about changes in entry occupations, demands for skills, and minimum requirements for entry jobs. These data will provide implications for curriculum innovations and revision, as well as for teacher education. Planning for the necessary educational implementation derived from data collected in the first year of this study will be initiated during the second year.

Phase 2 of this study is not a part of the proposal, but will be the educational implementation of necessary curriculum changes and revisions. This will include the development, tryout, and evaluation of new courses and procedures. These courses would be designed to enable high school leavers to develop skills required for the changing entry-job market. Although this second phase is not part of this proposal, this implementation would be based upon the data acquired and planning necessary for such revisions, which will be the end product of phase one. Since phase 2 is not part of this proposal, the balance of what is written below refers to phase one only.

OBJECTIVES

1. To obtain information about the skills required for various entry jobs and the availability of these jobs.
2. To determine the relationship between high school education and the present occupation of high school graduates and dropouts from Office and Retail Curricula.
3. To develop a research methodology formulating indexes which reflect changes in entry-job requirements and opportunities.

An attempt will be made to obtain answers to the following questions in order to achieve these objectives:

1. How many entry jobs were there five years ago? Three years ago? One year ago?
2. How many entry jobs are there today for which the high schools are offering sufficient training? How many will there be in one year? 18 months? Two years?
3. What specific abilities and knowledges are demanded by employers for these entry jobs?
4. What specific abilities and knowledges appear to be needed for these entry jobs?
5. What types of entry jobs were secured by high school leavers?
6. What types of entry jobs were secured by high school graduates who had completed a college preparatory program, but who had not graduated from college?
7. What are the implications of these data for changes in the high school curricula--in general education, in occupational preparation?
8. What indices of changing entry-job opportunities do these data provide?
9. What are the intervals necessary between interviews for the development of a valid index of changing entry-job opportunities?

LIMITATIONS OF THE STUDY

The proposed study will be limited to one urban center which can become a prototype for other urban centers. The advantages of working with the facilities in Detroit are:

1. All of the cooperating agencies involved--Detroit Public Schools, Business Teachers' Club of Detroit, Wayne State University, and the University of Michigan--have facilities in Detroit.
2. As a member of The Great Cities Projects and the World of Work Studies, the Detroit Public Schools is vitally interested in participating in this study.
3. The necessary employer data is readily accessible from the City of Detroit.
4. Employer groups (see page 16) have indicated a desire to cooperate in furnishing necessary data.

While attention will be given to collecting data relative to the total number and type of entry jobs, questions concerning specific skill demands will be restricted to office and retail occupations. These occupations will receive special emphasis because:

1. A high percentage of students take one or more courses in these curricula,[1] thus it will be possible to investigate the relationships between entry job opportunities, required skills, and the high school curriculum.
2. The results of a pilot study suggests that office and retail occupations provide entry jobs. These entry jobs, apparently require skills which are the objectives of specific high school office and retail education courses.
3. Office and retail occupations exist in all urban centers.

It is assumed that the techniques and procedures utilized in the proposed study would be applicable in other urban centers. It seems quite reasonable that only minor changes will be needed in instrumentation and methodology in order to carry out similar projects in other occupational fields.

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[1] "Of the non-academic subjects, business education was the most popular, with approximately 81% of all pupils (90% of the girls and 69% of the boys) completing some credits in this area and more than 18% completed over three credits (USOE Bulletin OE33025, Nov. 10, 1962, entitled What High School Pupils Study.

RELATED RESEARCH

A thorough search of the Wayne libraries failed to reveal reports of previous research studies in this specific field. Through contacts with appropriate social and governmental agencies in Detroit, however, several reports were secured that have relevancy to this study.

1. In 1956-57 The Detroit Commission of Children and Youth conducted a status study to determine the employment pattern for youth in Detroit. They found that a large percentage were unemployed and that many had never been gainfully employed. They did not determine, however, the number, type and requirements of entry jobs available to youth.

2. The Michigan Employment Security Commission has been advised of a pilot study to be started next year in five communities to determine employment opportunities and market conditions for young workers. This study has not been started and it will not be concerned with the entry job market, nor educational requirements for these entry jobs.

3. The report of Michigan Manpower training needs is important to this study (as are similar U.S. Department of Labor reports) as a source of projected employment trends. However, this report did not attempt to identify job opportunities nor requirements for entry jobs.

4. The Detroit school system is in the process of developing a survey of students' feelings toward school. This study will have some relevance to the proposed study in that contacts will be made with high school graduates. However, it has been determined through consultation with the director of that project that the focus and procedures of their study will not provide the data needed for this proposed project.

5. A representative of the Michigan Employment Security Commission found that "firm data on the employment of high school graduates and of drop-outs are difficult to obtain, since youth entering the job market do not usually seek assistance of the state employment service." He further emphasized that "starting in 1965 and continuing until 1975, there will be a continuing rise of the number of young people entering the job market each and every year. The problems that we are facing in 1962 and have been facing since 1958, (of preparing them for and helping them find entry jobs) are only a preamble to the serious problem that Detroit and the nation will be facing in 1965 and thereafter." (Note: the comment in the above parenthesis is F. Cook's editorial comment.)

PROCEDURES

A pilot study was the testing ground for the sampling procedures and interview instruments which are incorporated in the present proposal. The pilot study was conducted in a community in the Detroit Metropolitan Area during 1962-3. It was accomplished through the technical and financial assistance of the Institute for Regional and Urban Studies (Wayne State University), and the financial support of the Vocational Education Division of the Department of Public Instruction for the State of Michigan. It is reasonable to assume that the instruments and procedures utilized in the pilot study can be adapted for use in this study.

The sampling procedures described in this proposal are satisfactory for use in those urban areas in which access to city assessors' tax rolls are possible. In centers where such lists are not available, a classified telephone list is a possibility. Checks between these two methods of sampling will be carried out even though the sampling procedures described will be utilized first.

The interview instruments which were developed in the pilot study are shown as exhibits 1 and 2. They will be modified and revised through practice interviews with respondents who will not be part of the sample which will be drawn.

The techniques and procedures described on the following pages will be refined and utilized in the present proposal.

To complete this study, it is believed that a two-fold approach is necessary:

1. To survey the hiring practices of firms which provide entry jobs by interviewing employers.

2. To survey former students who have left school to determine their employment history, their high school training, and relationships between the two.

This two-fold approach is necessary to obtain an accurate perspective of the changing job market. For this reason, two surveys are being conducted.

Brief Overview of Entire Procedure

Entry Job Survey
1. Identify population of businesses and industries.
2. Draw stratified proportional representative sample.
3. Test run interview instruments and modify if necessary.
4. Train interviewers to achieve adequate consistency.
5. Conduct entry job survey.
    a. Repeat 12 months later.
    b. Repeat 18 months later.
6. Tabulate data for machine processing.

B. School Leaver Follow-Up Survey
1. Identify population of school leavers.
2. Draw stratified proportional representative sample.
3. Test run interview protocol.
4. Train interviewers to achieve adequate consistency.
5. Conduct school leaver survey repeating 12 and 18 months later.
6. Tabulate data for machine processing.

C. Analyze, compare, and write up relationship between both surveys.

A. Sampling Business and Industries

1. The population for these interviews will be all business and industrial firms in Detroit. The approximate number, according to the Michigan Employment Security Commission, is 30,000.

2. The sampling form which appears to be most advantageous for the collection of relevant information is a stratified sample. The process of "optimum allocation" will be employed to allocate a simple random sample of sufficient size to estimate, with 99% confidence under the condition of a 5% relative sampling error, the value of the population mean score of a set of constructed scores based upon the categories of:

1. Diversity of job requirements
2. Experiences
3. Size of company
4. Type of business

The constructed score is based upon five values of scores (1-5, with 5 as the highest value) distributed over each of the four categories. For example, Company A which demands a relatively wide range of skills for its entry jobs would receive a score of 5 in the "diversity" category. If the company was relatively indifferent to the "experience" presented by the applicant as a job qualification, a score of 2 would be assigned to this company in this category. In similar fashion, scores of 1 through 5 would be assigned for each of the categories: "size of company" and "type of business." In this fashion a constructed score is derived for each company included in the pilot study sample.

Based upon estimates derived from pilot study data, with n=153 elements (company scores), a sample size of n=486 was found to be adequate. The table below illustrates how the random sample of 486 elements was allocated to each of eight Index Categories.

ALLOCATION TO INDEX CATEGORIES

Index Category	N_j	S_j	N_jS_j	$\frac{N_jS_j}{\Sigma N_jS_j}$	Allocation of Sample Size n=486
I	5,070	.10	507.0	.12	58
II	1,470	.11	161.7	.04	20
III	3,960	.12	475.2	.11	54
IV	10,440	.14	1461.6	.34	164
V	870	.18	156.6	.04	20
VI	1,890	.17	321.3	.08	40
VII	2,520	.15	378.0	.09	44
VIII	3,780	.20	756.0	.18	86
	30,000	ΣN_jS_j	4217.4	1.00	486

In this Table, Category I is Construction and Manufacturing Durable; II is Manufacturing Non-durable; III is Warehousing and Wholesale Trade; IV is Retail Trade; V is Financial, Real Estate, and Insurance; VI is Business Services; VII is Personal Services; VIII is Entertainment and Professional Services. The categories were defined on the basis of the pilot study data. N_j denotes the number of companies in a given stratum; S_j denotes a pilot study estimate of the standard deviation of "constructed" scores for the companies composing a given stratum, and N_jS_j is the product of these respective values for each stratum.

The mean score of the "constructed scores of this sample was $\bar{x}=4.54$. The standard deviation was $S=1.98$. The coefficient of variation then became $C=\frac{1.98}{4.54}=.44$.

Under the conditions of $C=.44$, a 5% relative sampling error, and a 99% confidence interval, the number of objects necessary for a minimum size simple random sample drawn from an infinite population was found to be n=486. In order to accommodate the requirements of a minimum of 3 companies per stratum, it was decided that the size of the sample should fall somewhere within the range of 486-526 elements.

Each Index stratum was stratified into 5 strata determined as follows:

1. Firms employing more than 500 individuals
2. Firms employing between 100 and 500 individuals
3. Firms employing between 25 and 99 individuals
4. Firms employing between 4 and 24 individuals
5. Firms employing fewer than 4 individuals

It was decided that despite the mathematical findings of the "optimum allocation" formula no less than 3 companies should be included in each of the 5 strata within a given Index Category.

Following the same procedures that were employed in the process of allocating the 486 elements of the random sample of the 8 classification indices, the elements allocated to a given stratum (e.g., 58, 20, 54, 164, etc.) will be allocated to each of the five strata within the respective Index Classifications.

3. Steps for obtaining the sample:

a. Obtain a complete listing of all business and industrial firms from the City Tax Assessor's Office.

b. Classify all business and industrial firms according to the Standard Industrial Code (e.g., Alphabetical Index of Occupations and Industries issued by the U. S. Department of Commerce.) Assign Standard Industrial Code numbers to no more than 8 different strata.

c. Within each stratum, find the total number of people employed by firms according to the five categories of size given above. Between 486 and 526 firms will be interviewed.

d. A table of random numbers will be employed to select the number of firms necessary to satisfy the minimum requirement for each stratum. In no case will there be less than 3 firms chosen for each stratum.

Firms thus selected are designated as part of the original sample. Selection of additional firms, to be designated as "alternates" to the original sample, will also be effected.

The total number of additional firms will be almost as many as were selected for the original sample. Records will be maintained to preserve the sequence in which firms were selected. If we fail to interview a firm in the original sample, the next listed firm in the alternate list will be substituted.

This process will be continued until the entire sample is selected. Within each stratum, selection will begin with the sub-part containing the smallest companies. If in some particular stratum there is no business of the smallest size, we will start with sub-part number 4.

Firms within a stratum will be numbered in sequence using a different color for each sub-part. The largest in red, next largest in blue, etc. These will be the reference numbers to which one coordinates numbers from the table of random numbers. It is recognized that this procedure will be time consuming; however, it will provide a sample that is more representative of the total entry job market.

4. A total sample of 1458 to 1978 will be drawn in three surveys over an 18-month period. Each survey would provide a representation of all entry job occupations for Detroit. A comparison of these surveys would be used in determining changes in entry job opportunities and the interval necessary for developing an index.

B. Sampling High School Leavers (graduates and drop-outs who remain in Detroit Area)

1. The sample will be drawn from data obtainable through the Detroit School Census.

2. The population for these interviews will be selected (e.g. the class of 1962) school leavers from Detroit public schools.

3. Stratified random sampling will be used. The process of "optimum allocation" will be employed with the primary strata being based upon geographical areas and the size of the high school. Sub-stratification will be effected in terms of: (1) curricula, (2) graduates, (3) dropouts within one year of graduation; (4) dropouts within 2 years of graduation; and, (5) dropouts within 3 years of graduation.

4. The same basic procedures will be used for selecting the sample as described for the selection of employers described above.

5. A sample of an adequate number of respondents as defined in step I (between 500-600) will be drawn. This process will be accomplished in three surveys over an 18-month period. Each survey will include an adequate sample of high school graduates and dropouts as previously described. The comparison of the three surveys will complete the determination of the interval necessary for developing a valid index.

Experimental Design

1. Utilize and refine the following instruments which were tested as part of the pilot study.

a. Instrument #1: Interview Instrument for Entry-Job Survey. The purposes of this instrument were to determine:

   1) the past, present, future entry job opportunities available in the sampling community for high school leavers who had no previous work experience.

   2) the specific employer demands for these entry jobs in terms of educational training and skills. (See Appendix 1)

b. Instrument #2: Interview Instrument for High School Leavers. The purpose of this instrument was to determine the employment patterns of students after they left high school. (See Appendix 2)

2. Utilize the sampling and statistical procedures and the interviewing techniques developed in the pilot study to collect data on a periodic pattern. In order to determine for future use, the intervals necessary between surveys for the development of a valid "Index" of entry job opportunities. It is proposed that the initial survey be repeated at an interval of 12 months and 18 months.

3. Make recommendations for continued utilization of the "Index".

4. Make recommendations for utilization of instruments and procedures in other subject matter areas and in other metropolitan areas.

5. Planning necessary educational implementation for phase two.

Phase Two

Develop the procedures for implementation of the results of phase one. This would be a study to continue the utilization of the index and would emphasize the development, tryout, and evaluation of new instructional units, courses, techniques, materials, and procedures for the curricula.

As indicated previously, although this phase is not part of this proposal request, it is felt necessary to include it in the experimental design, in order to view the full scope of the study.

Information to be Obtained

The information to be obtained from Instrument #1 would include the following:

1. The attitude of the employer towards hiring school leavers with no previous full-time work experience.

2. Hiring patterns utilized by employers during the past two years regarding high school graduates and drop-outs with no previous full-time experience.

3. The skills required for entry jobs.

4. The employers' practices in connection with the following:

   a. Checking on applicant's educational background.

   b. Testing of prospective employees.

5. Their evaluation of specific high school courses as prerequisites for employment.

6. Total number of entry jobs for high school leavers with no previous full-time experience.

The information to be obtained from Instrument #2 would include the following:

1. Personal data
    a. Military experience, if any.
    b. Educational experience in high school.
    c. Educational experience beyond high school, if any.
    d. Marital status, sex, race, and age.
2. Employment experience, both initial entry job and present employment.
3. Attitude towards high school experience as it relates to his job.

Procedures for Gathering Information

Employers and school leavers will be contacted by personal interview. This procedure is deemed necessary to insure the greatest possible return of available data. Past experience indicates that the refusal rate is very high when other procedures are used. One necessarily must question the validity of data obtained by these procedures because of the biasing effect of high refusal rates. For example, information obtained from the Michigan Employment Security Commission indicates that their percentage of return on initial contact of mailed questionnaire to employers is about 35 per cent and only 60 per cent on follow-up. It should be noted that this is a government agency and therefore assumed that the return to our organization would be even lower.

Analyses

All interview data will be card punched and tabulated using the facilities of the University Computing Center. Quantifying the job opportunities in certain types of business is purely a descriptive operation and the primary objective is to describe these efficiently and effectively. Data will be appropriately tabulated on the distribution of entry job opportunities.

In considering trends from one set of interviews to the next and the interrelationship between the data concerning students and job opportunities, inferential statistics will be necessary. Tests of significance, correlations, and correlation analysis are procedures for which programs are already available at the computing center and will be used to support all inferences to be made from the data.

Expected End-Product

It is anticipated that as a result of the work completed through this proposed research, the necessary implementation for the development, tryout, and evaluation of new instructional units, courses, and procedures for the high school curricula will be possible.

Phase 2

Planning necessary for educational implementation for Phase Two to begin at the end of Survey #1 and to be completed by the end of Survey #3: 14 months

Personnel

Special personnel required for this project would include a project director, a research specialist, a committee of principal advisors, and a secretary.

A. Project Director - Fred S. Cook

1. Positions Held

1963- Professor of Business Education, College of Education, Wayne State University.

1960-63: Associate Professor of Business Education, College of Education, Wayne State University.

1955-59: Assistant Professor of Education, School of Education, Stanford University (in charge of Business Education and Audio-Visual Education), Stanford, California.

1953-54: Summer Sessions: Visiting Professor, School of Education, University of Michigan, Ann Arbor.

1952-55: Head, Business Education, Coe College, Cedar Rapids, Iowa.

1948-52: University of Michigan:

    a. Teaching fellow and critic teacher, University High School and School of Business Administration.
    b. Summer Sessions: Lecturer in Education.
    c. Instructor, School of Business Administration.

1947-48: Instructor, Business Administration, Ohio Northern University.

2. Education

Undergraduate: Majored in business administration and business education. Was graduated from Ohio Northern University, "with distinction," November, 1946.

Graduate: Majored in business education, cognate work in business administration. M.A., University of Michigan, August, 1948.

Ph.D.: University of Michigan, February, 1953. Dissertation: A Study to Determine the Predictive Value of the Detroit Clerical Aptitudes Examination.

3. Organizations and Offices Held:

California Business Education Association. State President.

National Office Management Association. Helped organize the Cedar Rapids and Sequoia chapters and was charter president for both. National Director, Area 14, 1959-60.

Fund for the Advancement of Business Education. Helped organize this non-profit educational foundation. Chairman, Board of Governors, 1959-60. Member, Board of Governors, 1960-61.

Delta Pi Epsilon, Kappa Chapter. National Chairman of the Research Committee, 1963-64.

Detroit Records Management Association. Helped organize this association and was Vice-President, 1951-52.

4. Other Professional Activities:

Participated in many local, state, and regional professional meetings as a speaker, consultant, etc.

Initiated and taught a course in beginning typewriting over an open circuit television station in San Francisco. This program was repeated in 1958.

5. Additional Work Experience:

1960-63: Educational Director of the National Secretaries Association (International).

1954-61: School year. Had a number of consulting jobs in the fields of office layout, forms design, records control and training programs, office management, school construction, and curriculum. Recently completed a market survey on teaching machines for Rheem Manufacturing Company.

1954: Summer. Worked for four weeks with the Iowa-Illinois Gas and Electric Company at Davenport, Iowa, on a F.E.E. Fellowship.

1953: Summer. Worked for five weeks with the Carlson Hybrid Corn Company on a Foundation for Economic Education Fellowship. Helped organize a new department, set up procedures and forms. Was retained by the concern as an office management consultant during the 1953-54 school year.

6. Publications:

a. Co-author, Gregg Junior High Typing, published in 1959.

b. Editor, Secretarial Study Guide, published in 1963 by the National Secretaries Association (International).

c. Over 40 articles published in: JOURNAL OF BUSINESS EDUCATION;

BUSINESS EDUCATION WORLD; NATIONAL BUSINESS EDUCATION QUARTERLY; UNITED BUSINESS EDUCATION FORUM; BALANCE SHEET; OFFICE EXECUTIVE; MICHIGAN BUSINESS EDUCATION NEWS; REMINGTON RAND'S SYSTEM; BUSINESS TEACHER; THE SECRETARY.

d. Author of chapters in four yearbooks published by the American Business Education Association.

B. COMMITTEE OF PRINCIPAL ADVISORS

The principal educational advisors would include, but would not be limited to the following:

Ann Lind, Supervisor of Distributive Education, Detroit Public Schools.
Jeanne Reed, Supervisor of Business Education, Detroit Public Schools.
Leslie J. Whale, Director of Business Education, Detroit Public Schools.
Frank W. Lanham, Chairman of Business and Distributive Education, University of Michigan.

Consultants and principal advisors will be secured from business, industry, governmental agencies, labor union, and educational institutions.

The responsibility of the principal advisors and project director, who will act as coordinator, would be to:

1. Direct the overall planning of the proposed project.

2. Consult with the research specialist when necessary in terms of utilization of data acquired from the surveys.

3. Participate in planning necessary educational implementation for phase two.

C. RESEARCH SPECIALIST

It is expected that the research specialist would be an expert in the research techniques of sampling and interviewing.

Facilities Available

The research associate will be a part of the staff of the College of Education of Wayne State University.

The extensive research resources of the University include a staff of professionals, a core of experienced and reliable technicians, and a supply of such basic tools as calculators and other office machines. In addition, the College of Education has close relationship with the Wayne State University Computing Center which has provided electronic data processing services for the University for the past 14 years.

Duration

Total amount of time required: Two Years.

Beginning: January 1, 1964

Ending: December 31, 1965

Other Information

A. The following agencies have given their guidance in the preliminary planning for this study:

Institute for Economic Education--Mr. Clyde L. Reed, Director

Greater Detroit Board of Commerce Education Committee, Mr. Eldred Scott, Chairman, and Mr. Douglas Mueller, Executive Staff

McGregor Fund, Wayne State University--Mr. Mark Beech, Coordinator

Michigan Employment Security Commission--Mr. Richard Elliott and Mr. Bert J. Whalen, Manpower Development and Training Section, MESC

Detroit Commission of Children and Youth--Mrs. Roslyn Kane, Technical Staff

Retail Merchants Association--Mr. George Duff, Secretary-Treasurer

Detroit Junior Board of Commerce--Mr. W. A. Irwin, Secretary

Automobile Manufacturers Association--Mr. C. E. Howard, Personnel Director

National Office Management Association--Mr. Roger F. Shively, Public Relations Director of the Detroit Business Institute

Economic Club of Detroit--Mr. Allen Crow, President Emeritus.

B. This proposal has not been submitted to any other agency or organization.

C. This is not an extension of or an addition to a previous project supported by the Office of Education.

A B S T R A C T

Objectives

1. To obtain information about the skills required for various entry jobs and the availability of these jobs.

2. To determine the relationship between high school education and the present occupation of high school graduates and dropouts from Office and Retail Curricula.

3. To develop a research methodology formulating indexes which reflect changes in entry-job requirements and opportunities.

An attempt will be made to obtain answers to the following questions in order to achieve these objectives:

1. How many entry jobs were there five years ago? Three years ago? One year ago?
2. How many entry jobs are there today for which the high schools are offering sufficient training? How many will there be in one year? 18 months? Two years?
3. What specific abilities and knowledges are demanded by employers for these entry jobs?
4. What specific abilities and knowledges appear to be needed for these entry jobs?
5. What types of entry jobs were secured by high school leavers?
6. What types of entry jobs were secured by high school graduates who had completed a college preparatory program, but who had not graduated from college?
7. What are the implications of these data for changes in the high school curricula--in general education, in occupational preparation?
8. What indices of changing entry-job opportunities do these data provide?
9. What are the intervals necessary between interviews for the development of a valid index of changing entry-job opportunities?

Procedure

Sample design--

1. Population - Business and Industrial Firms - Sampling Form - Stratified Random Sample.

2. Population - High School Graduates and Dropouts - Sampling Form - Stratified Random Sample.

Experimental design--

1. Utilize and refine the following instruments:
    a. Interview Instrument for Entry Job Survey.
    b. Interview Instruments for High School Leavers.

2. The above instruments will be administered by personal interview.

Tentative Time Table

Beginning: January 1, 1964 - Ending: December 31, 1965

APPENDIX B

EMPLOYER'S INTERVIEW

INTERVIEW NUMBER: ____

1. Name of Company: ____

2. Type of Company: ____

Major Classification Code: ____

Size Code:
____ A. Less than 4
____ B. Between 4 and 24
____ C. Between 25 and 99
____ D. Between 100 and 500
____ E. More than 500

2A. Year Company was Founded: ____

3. Address: ____

4. Telephone Number: ____

5. Respondent: (Mr .) (Mrs.) (Miss) ____

6. Title and Department of Respondent: ____

____

Appointment for Interview: Date ____

Time ____ AM ____ PM

Date of Interview: ____

Time Began: ____ AM PM Time Completed: ____ AM PM

REASONS FOR NOT COMPLETING INTERVIEW:

NAME OF INTERVIEWER:

Forms left with Respondent: Page Number ____ Page Number ____
Page Number ____. Page Number ____

1. What is the total number of employees in this installation? (**INTERVIEWER:** Check appropriate group.)

____ A. Less than 4
____ B. Between 4 and 24
____ C. Between 25 and 99
____ D. Between 100 and 500
____ E. More than 500

1A. Does your company have more than one installation in the City of Detroit? (**INTERVIEWER:** Political boundaries of City of Detroit only.)

Yes ____ No ____

IF NO: Go to Question 1D below.

IF YES: 1B. What is the total number of employees in **all your** Detroit installations? (**INTERVIEWER:** This includes R's installation; check appropriate group.)

____ A. Less than 4
____ B. Between 4 and 24
____ C. Between 25 and 99
____ D. Between 100 and 500
____ E. More than 500

1C. About how many part-time and/or seasonal employees do you hire in **all your** Detroit installations? (**INTERVIEWER:** This includes R's installation.)

____

1D. How many part-time and/or seasonal employees do you hire in **this** installation?

____

INTERVIEWER: Record SIC Code on the following line (see **Type of Company** on face sheet for SIC Code Number):

____

Ask Question 2 for **only** companies that have a 3 or 4 SIC Code (see number you have recorded above.

2. What percentage of **your employees** are in office, and sales or sales-supporting jobs? (INTERVIEWER: Record percent by type.)

In **this** installation: Office ____
Sales & Sales-Supporting ____

In **all** installations: (City of Detroit including R's.) Office ____
Sales & Sales-Supporting ____

3. DO YOU HAVE ENTRY JOBS FOR PEOPLE BETWEEN THE AGES OF 16 AND 21 WHO HAVE A HIGH SCHOOL EDUCATION OR LESS AND NO PREVIOUS EXPERIENCE ON A SIMILAR OR RELATED FULL-TIME JOB? (THAT IS, IS THERE ANYTHING HERE THAT A YOUNG PERSON WITHOUT EXPERIENCE COULD DO?)

YES ____ NO ____

IF NO: GO TO QUESTION 4 ON THE NEXT PAGE.

IF YES: 3A. AS A GENERAL RULE, DO YOU HIRE HIGH SCHOOL GRADUATES OR DROPOUTS AGED 16-21 WITHOUT PREVIOUS FULL-TIME EXPERIENCE ON A SIMILAR OR RELATED JOB?

YES ____ NO ____

IF YES: GO TO QUESTION 4 ON THE NEXT PAGE.

IF NO: 3B. WOULD YOU UNDER CERTAIN CONDITIONS?

YES ____ NO ____

IF YES: 3C. WOULD YOU LOOK AT THIS CARD AND RANK NO MORE THAN 2 LETTERS USING A 1 OR 2, WHICH BEST DESCRIBES UNDER WHAT CONDITIONS YOU WOULD HIRE THEM? (INTERVIEWER: GIVE R CARD 1 AND RECORD NUMBER NEXT TO LETTER.)

____ A. IF JOBS EXIST REQUIRING NO EXPERIENCE
____ B. IF APPLICANT IS HIGHLY RECOMMENDED
____ C. IF APPLICANT MADE A GOOD IMPRESSION
____ D. IF APPLICANT WAS SKILLED IN JOB APPLYING FOR
____ E. IF APPLICANT MEETS A SPECIFIED AGE
____ F. OTHER (LIST):

IF NO: 3D. WOULD YOU LOOK AT THIS CARD AND RANK NO MORE THAN 2 LETTERS USING A 1 OR 2, WHICH BEST DESCRIBES WHY YOU WOULDN'T HIRE THEM UNDER ANY CONDITIONS? (INTERVIEWER: GIVE R CARD 2 AND RECORD NUMBER NEXT TO LETTER.)

____ A. TOO IMMATURE AND INEXPERIENCED
____ B. TRAINING TIME TOO LONG AND/OR EXPENSIVE
____ C. UNION (OR OTHERS) WON'T LET US (CAN'T LEGALLY HIRE THIS AGE GROUP
____ D. INSURANCE TOO HIGH (HAZARDOUS WORK)
____ E. OTHER (LIST):

4. WITHIN THE PAST SIX MONTHS HAVE YOU HAD FULL-TIME ~~JOBS FOR~~ PEOPLE AGED 16-21 WITHOUT EXPERIENCE?

YES ____ NO ____

IF NO: GO TO QUESTION 5 ON PAGE 6.

IF YES: 4A. WITHIN THE PAST SIX MONTHS HAVE YOU HIRED ANY SUCH PEOPLE AGED 16-21 WITHOUT EXPERIENCE?

YES ____ NO ____

IF NO: ASK 4B. THEN GO TO Q. 5 ON PAGE 6.

4B. WHY HAVEN'T YOU HIRED ANY? (INTERVIEWER: Indicate answers by serial order; please list other.)

____ A. HAD NO QUALIFIED APPLICANTS
____ B. NONE AGED 16-21 APPLIED FOR JOBS
____ C. BUSINESS HAS BEEN BAD
____ D. NO NEED FOR MORE EMPLOYEES
____ E. NOT A COMPANY POLICY TO HIRE THESE PEOPLE AGED 16-21
____ F. OTHER (LIST):

IF YES: 4C. ABOUT HOW MANY HAVE YOU HIRED? ____

4D. WERE ANY OF THEM HIRED FOR OFFICE AND/OR RETAIL JOBS?

YES ____ NO ____

4E. WERE ANY OF THEM HIRED FOR OTHER TYPES OF JOBS?

YES ____ NO ____

INTERVIEWER: PLEASE QUOTE THE FOLLOWING:

I WOULD LIKE TO GET SOME INFORMATION ABOUT THOSE WHO WERE HIRED IN THE LAST SIX MONTHS THAT WERE BETWEEN THE AGES OF 16-21.

INTERVIEWER: CHECK QUESTION 4D ABOVE TO SEE IF R HIRED FOR OFFICE AND/OR RETAIL JOBS; IF HE DID, TURN TO CHART ON NEXT PAGE. IF R ONLY HIRED FOR OTHER TYPES OF JOBS, TURN TO CHART ON PAGE 5.

FOR OFFICE AND RETAIL JOBS ONLY

INTERVIEW NUMBER: ____________________

4f. 4g. 4h. 4i. 4j.

Job Title	Ages: 16-21 GRADUATES		Ages 16-21 DROPOUTS		What are the duties of this job? (Be as specific as possible.)	What specific BUSINESS SKILLS do you DEMAND for these jobs? e.g., typing, machine operation, cashier, etc. (IF NONE, check "none."	
	No. of Males	No. of Females	No. of Males	No. of Females			NONE

ALL OTHER TYPES OF JOBS

INTERVIEW NUMBER: ____________________

4k 4l 4m 4n 4o

Job Title	AGES: 16-21 GRADUATES		AGES: 16-21 DROPOUTS		What are the duties of this job? (Be as specific as possible.)	What ability, knowledge, or specific skills do you demand for these jobs? (If none, check "none.")	
	No. of Males	No. of Females	No. of Males	No. of Females			NONE

5. During the NEXT 12 months, do you anticipate having any FULL-TIME OFFICE AND/OR RETAIL jobs for people between the ages of 16-21 without previous full-time experience on a related job?

YES ______ NO ______

IF YES: Go to Question 5b on the next page. (INTERVIEWER: For the remainder of the questionnaire we are only interested in OFFICE AND RETAIL JOBS for people between the ages of 16 and 21.)

IF NO: **ASK QUESTION 5A BELOW AND SKIP TO QUESTION 13 ON PAGE 11; THEN TERMINATE INTERVIEW.**

5a. Would you tell me why you don't think you will have jobs for them in the next 12 months? (INTERVIEWER: Probe for whether they will not have any jobs suitable for such youth and inexperienced workers OR would not hire them for other reasons.)

NOTE: Indicate answers by serial order; please list other:

____ Need experienced people; no time to train inexperienced people

____ Business is bad

____ Get our employees from other sources

____ Don't plan to make any changes or additions to staff

____ Had little success with youngsters of this age group

____ Can't hire anyone under 21, against company policy

____ No need for OFFICE AND/OR RETAIL EMPLOYEES

____ Other (list):

FOR OFFICE AND/OR RETAIL JOBS ONLY: Interview Number ____________

5b. About how many will be males? __________ (Interviewer: On the chart below obtain a breakdown on how many will be male graduates and how many will be male dropouts for each job title listed. These numbers must add up to the number recorded above.)

5c. About how many would be females? ________ (Interviewer: Follow the same directions given in 5b.)

5d	5e		5f		5g	5h: ASK FOR ALL JOB TITLES GIVEN	
(OFFICE AND/OR RETAIL JOBS) JOB TITLE	GRADUATES (Ages 16-21)		DROPOUTS (Ages 16-21)		FOR ALL JOB TITLES LISTED: What will be the duties of this job? (Obtain Specific Information.)	WHAT specific BUSINESS SKILLS will you DEMAND for these jobs? e.g. typing, machine operation, cashier, etc.	
	No. of Males	No. of Females	No. of Males	No. of Females		NONE	(If none, check column)

6. WOULD YOU GLANCE AT THIS CARD AND TELL ME WHICH OF THESE YOU USE TO GET YOUR FULL-TIME OFFICE, AND SALES OR SALES-SUPPORTING EMPLOYEES AGED 16-21? (INTERVIEWER: GIVE R CARD 3 AND INDICATE SOURCES MENTIONED BY RANK ORDER: 1, 2, AND 3; YOU MUST ASK R TO GIVE YOU SOURCES BY RANK ORDER.)

CARD 3:

____ A. EMPLOYEES ALREADY WORKING HERE.

____ B. PERSONAL REFERENCE (REFERRED TO EMPLOYER BY FRIEND OR SOMEONE OUTSIDE COMPANY).

____ C. AD IN A PAPER. WHICH ONES? ________________________________

____

____ D. MICHIGAN EMPLOYMENT SERVICE (MESC)

____ E. PRIVATE EMPLOYMENT AGENCIES

____ F. WALK-IN: HIRING GATE, PERSONNEL OFFICE

____ G. SCHOOLS: WHICH ONES? ________________________________

____

____ H. COOPERATIVE WORK STUDENTS (A STUDENT WHO IS EMPLOYED UP TO HALF-TIME DURING THE SCHOOL DAY FOR PAY. HIS/HER WORK STATION IS SECURED BY THE SCHOOL AND SUPERVISED BY A REPRESENTATIVE OF THE DETROIT PUBLIC SCHOOLS. THIS STUDENT RECEIVES HIGH SCHOOL CREDIT FOR THIS WORK.)

____ I. WORK EXPERIENCE STUDENTS (A STUDENT WHO IS EMPLOYED AFTER SCHOOL HOURS AND SECURES HIS/HER JOB THAT IS NOT SUPERVISED BY THE SCHOOL. THIS STUDENT MAY OR MAY NOT RECEIVE HIGH SCHOOL CREDIT FOR THIS WORK.)

____ J. PRESENT PART-TIME OR TEMPORARY EMPLOYEES AGED 16-21 WHO STAY ON AS FULL-TIME AND PERMANENT.

____ K. OTHER: WHICH SOURCES? ________________________________

____

____

____

____

____

7. WHAT TYPE OF SCREENING PROCEDURES DO YOU GENERALLY USE FOR YOUR OFFICE, AND SALES OR SALES-SUPPORTING FULL-TIME EMPLOYEES AGED 16-21? (INTERVIEWER: GIVE R CARD 4 AND CHECK IF PROCEDURE IS ALWAYS, SELDOM, OR NEVER USED.)

CARD 4:

ALWAYS	SELDOM	NEVER	SCREENING PROCEDURES
			A. APPLICATION BLANK.
			B. COMPANY TESTS.
			C. INFORMAL TALK WITH APPLICANT. WHO TALKS WITH HIM/HER? (OBTAIN TITLE OR POSITION.) ________________________
			D. FORMAL INTERVIEW WITH APPLICANT. CONDUCTED BY WHOM? (OBTAIN TITLE OR POSITION.) ________________________
			E. CHECK OF PERSONAL AND CHARACTER REFERENCES.
			F. CHECK OF REFERENCES FROM PREVIOUS EMPLOYERS
			G. CHECK OF SCHOOL REFERENCES FOR:
			1. GRADES
			2. ATTENDANCE RECORD
			3. OTHER: LIST.
			H. RECOMMENDATION BY SOMEONE FROM A SCHOOL:
			1. COUNSELOR
			2. TEACHER
			3. PRINCIPAL
			4. OTHER: LIST.
			I. PREVIOUS PART-TIME AND SEASONAL EMPLOYEES
			J. OTHER: LIST.

8. Do you test applicants for OFFICE AND/OR RETAIL JOBS aged 16-21? Yes _____ No _____

IF NO: Go to Question 9 on Page 10.
IF YES: Give R Card 5 and ask about each type of test separately.

8a.	8b.	8c.		8d. ASK QUESTION FOR EACH TEST GIVEN	
R Gives Test (✓)	TYPE OF TEST	MINIMUM SCORE REQUIRED		What is the name of the test? (If R does not know name of test, ask following question.) Where was the test purchased?	
		Record Minimum Score	Check if None	NONE	
	A. General Intelligence				
	B. General Aptitude				
	C. General Aptitude Clerical				
	D. General Aptitude Other				
	ACHIEVEMENT: E. Standardized General				
	F. Clerical (Battery)				
	G. Bookkeeping				
	H. Salesmanship				
	I. Arithmetic				
	J. Other (List):				

INTERVIEWER: Record an "NR" (none required) wherever there is no minimum score required.

K. _____ R gives STRAIGHT COPY typing test.

1. How many minutes is the test? ____________
2. How many errors are allowed? ____________
3. Can applicants erase and correct? Yes _______ No _______
4. What is the minimum words per minute that you require? ____________

_____ R gives ROUGH DRAFT (copy) typing test.

5. How many minutes is the test? ____________
6. How many errors are allowed (error rate)? ____________
7. Can applicants erase and correct? Yes _______ No _______
8. What is the minimum words per minute that you require? ____________

L. _____ R gives SHORTHAND test.

1. What is the method used for dictation? Oral _____ Machine _____
2. How many minutes is the dictation test? ____________
3. What is the acceptable "INPUT" rate of dictation? ____________
4. What is the OUTPUT rate of transcription? ____________
5. How is the shorthand test evaluated? ____________

A COOPERATIVE (CO-OP) WORK STUDENT is a student who is employed up to half-time during the school day for pay and receives high school credit for this work. His/her work station is secured by the school and supervised by a representative from that school.

9. Has your company ever hired high school co-op students? (INTERVIEWER: Please explain if respondent is not familiar with term "co-op student.")

Yes _______ No _______

IF NO: (Then skip to Q. 10 on Page 12)

9a. Would you look at this card and tell me why you have not had any co-op students? (Give R Card 6 and indicate answers by serial order; please list other.)

_____ No contact with co-op students (or schools)
_____ Jobs require full-time employees, or prefer full-time employees
_____ Too much bother
_____ Can't get them when I need them
_____ No particular reason
_____ Other (List):

IF YES: 9b. Do you have any co-op students working for you now?

Yes _____ No _____

IF YES: Go to next page.

IF NO: 9c. Is there any reason that you don't have any high school co-op students working now? (INTERVIEWER: Probe for no jobs or dissatisfaction; indicate answers by serial order; list other.)

_____ No contact with co-op students (or schools)
_____ Jobs require full-time employees, or prefers full-time workers
_____ Too much bother
_____ Can't get them when I need them
_____ No particular reason
_____ Other (List):

__IF__ __YES__: 9d. WHAT SCHOOL SYSTEM(S) DO YOU GET THEM FROM?

9e. HOW MANY AND WHAT TYPE OF CO-COP PROGRAM ARE THEY IN? (INTERVIEWER: RECORD NUMBER BY TYPE.)

OFFICE________________RETAILING__________________

OTHER (WHICH?)______________________________

____

9f. Would you say that they are excellent, fair, or unsatisfactory? (INTERVIEWER: Check below. If R makes any comments, please record.)

____ Excellent
____ Fair
____ Unsatisfactory
____ Other (List):

9g. DO THESE STUDENTS EVER STAY ON WITH YOU AS EMPLOYEES AFTER GRADUATING FROM HIGH SCHOOL?

Yes_________ No_________

10. DO YOU EVER HIRE HIGH SCHOOL STUDENTS WHO ARE STILL IN SCHOOL FOR PART-TIME WORK DURING THE SCHOOL YEAR WHO ARE NOT ON A CO-OP PROGRAM?

YES_________ NO_________

__IF__ __NO__: GO TO QUESTION 11 ON NEXT PAGE.

__IF__ __YES__: 10a. FOR WHAT KINDS OF JOBS ARE THEY HIRED? (INTERVIEWER: OBTAIN JOB TITLES.)

11. Please glance at this list of high school subjects and tell me how important you feel these are to you as prerequisites for OFFICE AND RETAIL employees? (INTERVIEWER: Give respondent Card 7 and have R evaluate each one: 1-very important; 2-some value; 3-doubtful value.)

CARD 7:

A. High School General Business Courses:

____Economics
____Consumer Economics
____Economic Geography
____Business Law
____Business Organization & Management
____General Business
____Principles of Data Processing

B. High School Business Skill Courses:

____Bookkeeping
____Business English
____Business Math
____Business Machines: ____Transcribing
____Duplicating
____Calculating
____Cash Register
____Data Processing
____Other (Which?)____________

____Marketing* (Distributive Education 1)
____Office Practice
____Salesmanship* and Sales Promotion (Distributive Education 2)
____Shorthand
____Typing
____Merchandising* (Distributive Education 3)
____Filing

11c. What other skills, knowledge, and attitudes do you consider very important for young people in getting and keeping an office or sales job?

IF NONE: Go to Question 12.

*This may also be called retailing.

12. Do you, as a general practice, give on-the-job training to your OFFICE AND/OR RETAIL people aged 16-21?

Yes__________ No__________

IF NO: Skip to Question 12g on the next page. IF YES: Complete chart below.

12a.	12b.	12c.	12d.	12e.	IF YES to Expand or Drop in Q. 12e.: 12f.
Type of job for which training is necessary?	Who does the training? (Obtain for each job.)	Why is training necessary? That is, what is the goal?	Length of training period? (No. of hrs.)	Do you plan to: a. continue, b. expand, or c. drop your training program? If expand or drop: Why?	What changes, if any, will this make in your hiring policy?

INTERVIEWER: Go to Question 12g. on next page.

12g. Do you subsidize or assist your **OFFICE AND/OR RETAIL** employees aged 16-21 in obtaining **any other kind** of training, i.e., classes, etc.?

Yes________ No________

IF NO: Go to Question 13 on page 16.

IF YES: 12h. In what ways do you assist them? (INTERVIEWER:

PLEASE RECORD ANSWER IN SERIAL ORDER; list other.

____ We pay part/all of classes taken

____ Give them time off work, pay for time spent in class

____ Give them paid training before they actually start the job

____ Other (List):

---

13. Do you now use any kind of data processing equipment? Yes____ No ____

IF YES: 13a. What kind of data processing equipment do you use? (INTERVIEWER: List all kinds mentioned--IBM Key Punch, Sorter, Tabulator, etc.)

____ Key Punch and/or Verifyer
____ Sorter
____ Collator
____ Reproducer
____ Interpretor
____ Printer
____ Computer (Specify type): ____________

____ Other (List): ____________

13b. Are you planning to install data processing equipment in the next year or two?

Yes ______ No ______

IF NO: Go to Question 14 below.

IF YES: 13c. What kind will you probably be installing? (INTERVIEWER: List all mentioned.)

____ Key Punch and/or Verifyer
____ Sorter
____ Collator
____ Reproducer
____ Interpretor
____ Printer
____ Computer (Specify type): ____________

____ Other (List): ____________

14. In your opinion, what SPECIFIC skills and courses should students be given in high school which you think are mandatory to help them get a job in data processing? (INTERVIEWER: List all mentioned.)

INTERVIEWER: PLEASE TERMINATE IF SHORT INTERVIEW.

15. Have you had to dismiss new OFFICE AND/OR RETAIL employees aged 16-21 in the last six months?

Yes ________ No ______

__IF NO__: Terminate interview.

__IF YES__:

15a. For what reasons? (__INTERVIEWER__: Probe for relative importance of attitude and personality versus competence and ability.)

Indicate answers by __serial order__ and list other.

_____ Negative Attitude (negative personality)

_____ Incompetence (inability to do the job)

_____ Negative attitude __and__ inability to do the job

_____ Other (List):

INTERVIEWER: Record comments on next page.

16. Respondent's Comments:

17. Interviewer's Comments:

1-9-65: ml/mm

APPENDIX C

SCHOOL LEAVER'S INTERVIEW

INTERVIEWER: ______________ INTERVIEW NUMBER: ______________

Sex: ______________ Date of Birth: ______________

Marital Status: ______________ Any children? Yes _____ No _____

IF YES: What are the ages? ______________

Last High School Attended: ______________

Date Entered: Month ______________ Year ______________

Grade Entered: ______________

Date Left: Month ______________ Year ______________

CURRICULUM: Business _____ College Prep. _____ General _____

Appointment for Interview: Date ______________ Time __________ AM PM

Date of Interview: ______________

Time Began: __________ AM PM Time Completed: __________ AM PM

REASONS FOR NOT COMPLETING INTERVIEW (Examples: Death in family, illness, R is out of town, unable to contact, etc.)

INTERVIEWER: Date:

INTERVIEWER: IMPORTANT; PLEASE NOTE!

INFORMATION MUST BE OBTAINED DURING TELEPHONE CONTACT. IF YOU GO COLD, COMPLETE FACE SHEET AND ASK QUESTIONS ON THIS PAGE TO DETERMINE ELIGIBILITY OF RESPONDENT.

PLEASE FOLLOW INSTRUCTIONS.

1. Do you have a job that is OUTSIDE the City of Detroit? Yes _____ No _____

IF NO: Ask Question 2 in box below.

IF YES: DO NOT INTERVIEW; R (Respondent) is OUT of sample. (INTERVIEWER: Before terminating contact, check to see if face sheet is completed.)

2. Do you have a job in the City of Detroit? Yes _____ No _____

IF YES: Interview R. (INTERVIEWER: Check to see if you have completed face sheet.)

IF NO:

2a. Are you looking for work? Yes _____ No _____

IF YES: Interview R. (INTERVIEWER: Check to see if face sheet is complete.)

IF NO: 2b. Would you tell me why you are not looking for work? (INTERVIEWER: Record answer below and before you terminate contact, check to see if face sheet is complete.)

INTERVIEWER: ______________ DATE: ______________

1. Since you left school, have you had any kind of classes or training?

Yes________ No_______

IF NO: Go to Question 2 on page 2

IF YES:

1a. Where did you have it?

____
(Name of School or Agency)

1b. How long?
FROM: ______________ TO: __________________
(Month/Year) (Month/Year)

1c. Did you complete this training/schooling?

Yes_______ No______

IF YES: Go to Question 2 on Page 2.
IF NO: Go to Question 1d below.

1d. Are you planning to return to your training/schooling within the next six months?

Yes_____ No_____ (Currently in School_____)

IF NO: Go to Question 2 on Page 2.

1e. Will this be full-time or part time?

Full time_____ Part-time_____ Don't Know______

---

2. Do you have a job now Yes_____ No_____

IF NO: Skip to Question 8 on Page 9

IF YES:

2a. What is the name of the company

____
(Name of Company)

2b Where is it located (INTERVIEWER: If office building, obtain street and nearest cross street.)

2c. What kind of business is that

2d. About how big a company is it, i.e. about how many people work there (**INTERVIEWER:** Obtain number of employees to best of R's knowledge for the installation that he/she is employed at. If more than one installation of this company in Detroit, obtain total number of employees in all Detroit installations but not in other cities)

R's Installation:	All Det. Installations including R's
____ A. Less than 4	____ A.Less than 4
____ B. Between 4 and 24	____B. Between 4 and 24
____ C. Between 24 and 99	____C. Between 24 and 99
____ D. Between 100 and 500	____D Between 100 and 500
____ E. More than 500	____E. More than 500

INTERVIEWER: QUESTION 2 CONTINUES ON NEXT PAGE.

2e. What is the title of the job you have now?

☐ ______________________
(Job Title)

2f. What kind of work do you do? (**INTERVIEWER**: Get as detailed a description as possible of a typical day's work.)

2g. Are you on the same job you were hired for?

Yes _______ No _______

IF YES: Go to Question 3 on BOTTOM OF NEXT PAGE.

IF NO: Go to Question 2H on next page.

2h. What job were you hired for? (INTERVIEWER: Obtain job title.)

2i. Why aren't you doing the work you were hired to do (INTERVIEWER: Check appropriate reason.)

_______ Promotion

_______ Unable to do job hired for

_______ Employer changed me, don't know why

_______ Other (Please specify):

3. How many hours a week do you work? (**INTERVIEWER**: Check appropriate group.)

_____ 33 hours or less
_____ 34 to forty hours
_____ More than forty hours

3a. What hours of the day do you usually work (**INTERVIEWER**: Please indicate hours with AM and PM.)

4. When did you start working there Month__________ Year__________

5. Would you look at this card and tell me how you found out about your job (INTERVIEWER: Give R Card 1 and check answer.)

____Employees already working there and personal references
____Ad in a paper
____Michigan Employment Security Commission OR Michigan Employment Service
____Private Employment Agency
____Public Employment Agency
____Walk in at Company's Personnel Office
____School; Board of Education
____Co-Op Program
____Work Experience Program
____Formerly employed there
____Other (Please specify):

6. Before you were hired, did someone in the company interview you.

Yes_____ No_____

IF YES: 6a. With whom did you have an interview (INTERVIEWER: Obtain title or position.)

IF NO: 6b. Do you know of any reasons why you didn't have an interview

Yes_____ No_____

IF NO: Go to Question 7 ON NEXT PAGE.

IF YES: 6c. What were the reasons (**INTERVIEWER**: Check appropriate reason; specify if other.)

____Interviewed elsewhere (MESC, Union, Private Employment Agency, Public Employment Agency, etc.)
____Was known by employer
____Company doesn't give any
____Rely on school's recommendations
____Other (Please specify)

7. Did you have to take some kind of test before you were hired for this job?

Yes_____ No_____

IF NO: Skip to Question 7B on page 8

IF YES: 7a. What kind of test did you take. Please look at this card and tell me if you had any of these tests for this job. (INTERVIEWER: Hand R Card # 2 and complete chart on next page.)

Question 7A

TEST TAKEN (✓)	TYPE OF TEST	MINIMUM SCORE REQUIRED		
		Record Minimum Score	No Minimum Score Required (✓)	Don't Know Minimum Score (✓)
	A. General Intelligence			
	B. General Aptitude			
	C. General Aptitude Clerical			
	D. General Aptitude Other			
	ACHIEVEMENT: E. Standardized General			
	F. Clerical (Battery)			
	G. Bookkeeping			
	H. Salesmanship			
	I. Arithmetic			
	J. Other (Specify):			

INTERVIEWER: Questions regarding tests continues on next page.

INTERVIEWER: Please record a "DK" (don't know) wherever R is unable to answer question.

K. ____ R took a straight copy typing test.

1. How many minutes was the test? ____________
2. How many errors were allowed? ____________
3. Could you erase? Yes ______ No ______
4. What was the MINIMUM words per minute that you had to type?

____

• • •

____ R took a rough draft typing test.

5. How many minutes was the test? ____________
6. How many errors were you allowed? ____________
7. Could you erase? Yes ______ No ______
8. What was the MINIMUM words per minute that you had to type?

____

L. ____ R took a shorthand test.

1. What was the method used for dictation? Oral ____ Machine ____
2. How many minutes was the dictation test? ____________
3. What was the acceptable MINIMUM rate of dictation? ____________
4. What was the MINIMUM rate of transcription? ____________
5. How did they evaluate your shorthand test? ____________

____

INTERVIEWER: Question 7 continues on next page.

UNEMPLOYED AND SEEKING WORK

8. (a) How many hours a week do you want to work? (INTERVIEWER: Check appropriate group.)

____ 33 hours or less per week

____ 34-40 hours per week

____ Don't care

(b) What kind of work have you been looking for? (INTERVIEWER: List all mentioned.)

____

____

____

____

____

____

____

____

____

____

____

____

____

INTERVIEWER: THIS QUESTION CONTINUES ON NEXT PAGE.

7b. HAVE YOU HAD ANY KIND FORMAL OF TRAINING ON YOUR PRESENT JOB OR FOR THE JOB SINCE YOU WERE HIRED?

Yes ____ No ____

IF NO: SEE QUESTION 7D BELOW. ASK ONLY IF R'S JOB IS OFFICE OR RETAIL.

IF YES: 7c. WHAT KIND OF TRAINING. (INTERVIEWER: OBTAIN SPECIFIC INFORMATION.)

INTERVIEWER: SEE QUESTION 7D BELOW. ASK ONLY IF R'S JOB IS OFFICE OR RETAIL.

IF OFFICE OR RETAIL:

7D. WHAT SPECIFIC BUSINESS SKILLS WERE DEMANDED FOR THIS JOB? (INTERVIEWER: PROBE FOR WHAT BUSINESS SKILLS EMPLOYER WANTED BEFORE HE WOULD HIRE R.)

INTERVIEWER: Go to QUESTION 9 on Page 11.

ASK ONLY IF UNEMPLOYED AND LOOKING FOR WORK

8d. Where have you applied for a job (INTERVIEWER: List all mentioned.)	8e. What happened at ___, that is why didn't you get the job? (INTERVIEWER: See possible answers at bottom of page and record letter below.)

A. No Openings (none at all, or none for my particular skill).
B. Race and Nationality
C Sex
D. Age
E. Religion
F Lacked qualifications for jobs they had
G. Don't know; never heard from them
H. Other (Please list in column next to agency):

F O R   A L L   R E S P O N D E N T S

9. What was the first job you had after leaving high school? .... the next job, etc. (INTERVIEWER: Complete chart below, but do not list current job. If R has not had any jobs since leaving high school, please write "NO JOBS" across chart; OR if current job is first job, write "CURRENT JOB" across chart; go to Q. 15 on p. 16)

	a. Name of Company and Location?	b. Type of Business?	c. What was your job title?	d. What did you do?	e. How many hrs a week did you work?		f. How long did you work?		g. What was your reason for leaving?
					33 or less	34 or more	FROM: mo./yr.	TO: mo./yr.	
	FIRST JOB AFTER LEAVING HIGH SCHOOL:								
☐									
☐									
☐									
☐									
☐									
☐									

INTERVIEWER: If R has had more than 6 jobs since leaving high school, please indicate the total number of part-time jobs (33 hrs. or less) and the total number of full-time jobs (34 hrs. or more). Jobs listed on chart must be included, plus current job.

Total Number of Part-Time Jobs (33 hrs. or less):__________ Total Number of Full-time Jobs (34 hrs. or more):______

(FOR FIRST FULL TIME JOB ONLY)

13. Before you were hired did someone in the company interview you?

Yes____ No____

IF YES: 13a. With whom did you have an interview? (**INTERVIEWER:** Obtain title or position.)

IF NO: 13b. Do you know of any reasons why you didn't have an interview?

Yes____ No____

IF NO: Go to question **14 below.**

IF YES: 13c. What were the reasons? (**INTERVIEWER:** Check appropriate reason, specify if other.)

____Interviewed elsewhere (MESC, Union, Private Employment Agency, Public Employment Agency, etc.
____Was known by employer
____Company doesn't give any
____Rely on school's recommendations
____Other (Please specify)

14. Did you have to take some kind of test before you were hired for that job?

Yes ______ No ______

IF NO: Skip to Question 14b on page 15.

IF YES: 14a. What kind of test did you take? Please look at this card and tell me if you had any of these tests for that job. (**INTERVIEWER:** Hand R Card 2 and complete chart on next page.

THIS PAGE FOR FIRST FULL-TIME JOB ONLY

(It is important that you read directions before proceeding with this page.)

INTERVIEWER: Do not ask questionsonpages 12* to 15 if R's first full time job is current job; please write "CURRENT JOB" on this page and skip to question 15 on page 16

Do not ask questions if R has not had any jobs since leaving high school; please write "NONE" on this page and skip to question 15 on page 16

Do not ask questions if R has not had a job where he worked more than 34 hours per week; write "INAP" on this page and skip to question 15 on page 16

INTERVIEWER: Now I would like to ask you a few additional questions about your first job after leaving high school where you worked more than 34 hours a week.

10. What hours of the day did you usually work? (INTERVIEWER: Please indicate with AM and PM.)

11. About how big a company is _ _ _ (check page 11 for name of company)? INTERVIEWER: Obtain number of employees to best of R's knowledge for the installation that he/she was employed at. If more than one installation of this company in Detroit, obtain total number of employees in all Detroit installations, but not in other cities.)

R's Installation:	All Det. Installations including R's
____a. Less than 4	____a.Less than 4
____b. Between 4 and 24	____b.Between 4 and 24
____c. Between 24 and 99	____c.Between 24 and 99
____d. Between 100 and 500	____d. Between 100 and 500
____e More than 500	____e.More than 500

12. Would you look at this card and tell me how you found out about that job?

(INTERVIEWER: Give R Card 1 and check answer.)

____Employees already working there and personal references
____Ad in a paper
____Michigan Employment Security Commission OR Michigan Employment Service
____Private Employment Agency
____Public Employment Agency
____Walk in at Company's Personnel Office
____School; Board of Education
____Co-Op Program
____Work Experience Program
____Formerly employed there
____Other (Please specify):

Question 14a

Test Taken (✓)	TYPE OF TEST	MINIMUM SCORE REQUIRED Record Minumum Score	No Minimum Score Required (✓)	Don't Know Minimum Score (✓)
	A. General Intelligence			
	B. General Aptitude			
	C. General Aptitude Clerical			
	D. General Aptitude Other			
	Achievement: E. Standardized General			
	F. Clerical (Battery)			
	G. Bookkeeping			
	H. Salesmanship			
	I. Arithmetic			
	J. Other (List):			

INTERVIEWER: Record a "DK" wherever R does not know answer to question.

K. ____ R took a STRAIGHT COPY typing test.

1. How many minutes was the test? ____________
2. How many errors were allowed? ____________
3. Could you erase and correct? Yes ______ No ______
4. What was the minimum words per minute that you had to type? ______

____ R took a ROUGH DRAFT (copy) typing test.

5. How many minutes was the test? ____________
6. How many errors were allowed? ____________
7. Could you erase and correct? Yes ______ No ______
8. What was the minimum words per minute that you had to type? ______

L. ____ R took a SHORTHAND test.

1. What was the method used for dictation? Oral ______ Machine ______
2. How many minutes was the dictation test? ____________
3. What was the acceptable MINIMUM rate of dictation required? ______
4. What was the MINIMUM rate of transcription? ____________
5. How did they evaluate your shorthand test? ____________

(continues on next page)

14b. DID YOU HAVE any kind of FORMAL training FOR THAT job OR for the job AFTER YOU were hired?
Yes ______ No ______ (IF NO: SEE Q. 14D BELOW.)

IF YES: 14c What kind of training? (INTERVIEWER: Obtain specific information.)

(INTERVIEWER: Q. 14D BELOW. READ INSTRUCTIONS.)

IF OFFICE OR RETAIL: (IF QUESTION IS INAPPROPRIATE, GO TO QUESTION 15 ON NEXT PAGE)

14d. What specific business skills were demanded for THAT job?
(INTERVIEWER: Probe for what business skills employer wanted before he would hire R.)

INTERVIEWER: Skip to Question 15 ON NEXT PAGE.

FOR ALL RESPONDENTS

15. Since you left school, Have you been out of work and looking for a job?
Yes___ No___

IF NO: Go to Question 16 ON NEXT PAGE.

IF YES: 15a. During what periods have you been out of work?
1. FROM: Month___ Year___ TO: Month___ Year___
2. FROM: Month___ Year___ TO: Month___ Year___
3. FROM: Month___ Year___ TO: Month___ Year___
4. FROM: Month___ Year___ TO: Month___ Year___

FOR ALL RESPONDENTS

16. When you were in high school, were you ever on a co-op, work experience, or job upgrading program?
Yes_________ No_________

IF NO: Skip to Question 17 on next page.

IF YES: 16a. Which type of program were you on?
CO-OP: Office_________ Retailing_________ Trade & Industry_________
JOB UPGRADING:_________ WORK EXPERIENCE:_________ OTHER (LIST):_________

16b. Where did you work while on this program? (Name of employer and location.)	16c. What kind of business was that?	16d. How long did you work there?		16e. What type of work did you do?	16f. Did you want to keep on working there when you left school?		16g. Why did you want or not want to stay on there?
		FROM: mo./yr.	TO: mo./yr.		YES	NO	

FOR ALL RESPONDENTS

17. When you were going to high school, did you have any kind of PAID part-time or vacation job? (INTERVIEWER: Make sure that you do not record on this page any jobs that R might have obtained through his/her school; this includes co-op, work experience jobs, etc.)

Yes ______ No ______

IF NO: GO TO QUESTION 18 on next page.

17a. Where did you work? (RECORD name of company & location)	17b. Type of business	17c. What was your job title?	17d. What did you do?	17e. How many hours a week did you work?	17f. How long did you work? FROM: mo./yr.	TO: mo./yr.

FOR ALL RESPONDENTS

18. Do you have or have you ever had a job on which you used any kind of office and/or retail machines?

Yes ______ No ______

IF NO: Go to Question 18e on the next page.

IF YES: Complete chart below.

18a.	18b.		18c.		IF YES TO 18c: ASK 18d
What kind(s) of office and retail machines have you used? (LIST ALL MENTIONED.)	ASK FOR ALL MACHINES Did you know how to work _ _ OR were you trained after you were hired?		ASK FOR ALL MACHINES Are you working on _ _ _ now?		Do you work on _ _ _ a. Daily b. Occasionally c. Seldom?
	KNEW	TRAINED	YES	NO	(RECORD LETTER BELOW.

INTERVIEWER: Continue with Question 18e on next page.

QUESTION 18: CONTINUED

18e. Is there any other kind of equipment that you use or have used?

Yes _______ No _______

IF NO: Go to Question 19 on the next page.

IF YES: Complete chart below.

18f.	18g.		18h.		IF YES TO 18h: ASK 18i
What other kinds of equipment have you used or are using now? (LIST ALL MENTIONED.)	ASK FOR ALL MACHINES Did you know how to work _ _ _ OR were you trained after you were hired?		ASK FOR ALL MACHINES Are you working on _ _ _ now?		Do you use _ _ _ a. Daily? b. Occasionally? c. Seldom? (RECORD LETTER BELOW.)
	KNEW	TRAINED	YES	NO	

FOR ALL RESPONDENTS

Would you look at this card and tell me which sources you have used when looking for a job? (INTERVIEWER: Give R Card 3 and check all mentioned in Column 2.)

R has never looked for work, please indicate and skip to Question 22 on P. 25; if R is a dropout, ask Q. 21, P. 24.

Source	Check (✓) If Used By R	19a. ASK ONLY FOR SOURCES CHECKED What was your reason for going to ----? (PROBE FOR reason R went to ----.)	19b. What happened when you went to ----? (Record letter that describes what happened) a. Took job (referred by them) b. Didn't offer me a job c. I refused a job d. Referred me to agency but did not get job e. Filled application blank and never heard from them f. Other (Specify):
Church			
Company Personnel Office			
Mass Media: Newspapers, TV, Radio, Etc.		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Michigan Employment Service or MESC			
Private Employment Agency			
Public Employment Agency			
School, Board of Education			
Union			
Other (List):			

CONTINUED: THIS PAGE FOR SOURCES NOT USED WHEN SEEKING EMPLOYMENT

See Column 2 on Page 21 for Sources R did not use when seeking employment; Please indicate in next column.	Check if not used by R	19d. Would you look at this card and tell me which letter(s) best describes why you didn't go to ---. (INTERVIEWER: Give R card 4 and ask for all sources not mentioned. Record letter below, please list "other.")
A. Church		
B. Company Personnel Office		
C. Mass Media: Newspapers, TV, Radio, etc.		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
D. Michigan Employment Service or MESC		
E. Private Employment Agency		
F. Public Employment Agency		
G. School, Board of Education		
H. Union		
I. Other (List):		

20. HAVE YOU EVER FELT THAT YOUR AGE, SEX, RACE, RELIGION, OR PLACE OF BIRTH WAS A FACTOR IN NOT GETTING A JOB? YES ______ NO ______

IF NO: GO TO QUESTION 20C BELOW.

IF YES: 20A. WHICH OF THESE FACTORS? (INTERVIEWER: CIRCLE ALL MENTIONED.)

AGE SEX RACE RELIGION PLACE OF BIRTH

OTHER (SPECIFY):

20B. WHY DO YOU THINK SO?

20C. HAVE YOU EVER FELT THAT YOUR AGE, SEX, RACE, RELIGION, OR PLACE OF BIRTH WAS A FACTOR IN GETTING A JOB? YES ______ NO ______

IF NO: GO TO QUESTION 22 ON PAGE 25*

IF YES: 20D. WHICH OF THESE FACTORS? (INTERVIEWER: CIRCLE ALL MENTIONED.)

AGE SEX RACE RELIGION PLACE OF BIRTH

OTHER (SPECIFY):

20E. WHY DO YOU THINK SO? (INTERVIEWER: AFTER THIS QUESTION, GO TO QUESTION 22 ON PAGE 25.*)

*IF R IS A DROPOUT, GO TO QUESTION 21 ON THE NEXT PAGE.

FOR DROPOUTS ONLY

INTERVIEWER: Now I would like to ask you a few questions about your high school career.

21. Why did you leave high school before you graduated? (INTERVIEWER: Probe for reasons having to do with unsuccessful school experiences. If so, what? Or having a job or promise of one; personal reasons, e.g., marriage or other types of reasons.)

INTERVIEWER: Check Page 1 to see if R had any kind of training or schooling since he left high school.

If R has had no further schooling or training, skip to Question 22 on next page.

If R has had further schooling or training of any kind, ask Question 21a below.

21a. You have already told me that you had further _ _ _ after you left high school, would you tell me why you decided on the need for more _ _ _? (INTERVIEWER: Please indicate with a check if R had training ______ or schooling _______.)

INTERVIEWER: Go to Question 22 on next page.

FOR ALL RESPONDENTS

INTERVIEWER: (DO NOT USE THIS STATEMENT FOR DROPOUTS): Now I would like to ask you a few questions about your high school career.

22. As you look back over your high school experience, what would you do differently? (INTERVIEWER: If R replies "nothing," please indicate and go to Question 22a below.)

22a. What do you wish your teachers, counselors, or someone else in the school would have done differently?

FOR ALL RESPONDENTS

23. Would you look at this card and give me the names of the courses and the number of terms or semesters that you received credit for in high school? (Give R Card 5 and indicate all mentioned.)

PLEASE NOTE: If they had to repeat a one-term course, this should be shown as "1" which they got credit for, not the two times they actually took the course.

Watch out for BUSINESS MATH and BUSINESS ENGLISH! If they do not know what these courses are, they probably never had them. Also, R may be giving you the number of terms for General Math and English. The clue to this is the number of terms (or semesters) they give. They may have had eight terms of English and four of math, but it is not probable that they had this many terms (or semesters) of BUSINESS MATH and BUSINESS ENGLISH.

A. GENERAL BUSINESS COURSES:

____ Economics
____ Consumer Economics
____ Economic Geography
____ Business Law
____ Business Organization & Management
____ General Business
____ Principles of Data Processing

B. BUSINESS SKILL COURSES:

____ Bookkeeping
____ Business English
____ Business Math
____ Business Machines:
    ____ Transcribing
    ____ Duplicating
    ____ Calculating
    ____ Cash Register
    ____ Data Processing
    ____ Other (List):

____ Marketing (Distributive Education 1: Retailing 1)
____ Office Practice
____ Salesmanship and Sales Promotion (Distributive Education 2)
____ Shorthand
____ Typing
____ Merchandising (Distributive Education 3)
____ Filing

INTERVIEWER: QUESTION 23 CONTINUES ON NEXT PAGE.

QUESTION 23: CONTINUED

23a. Have any of these courses that you have taken been of special help to you in getting and keeping a job?

Yes ____ No ____

IF NO:

23 b. Which courses haven't been helpful?

23c. Why haven't these courses been very helpful?

IF YES:

23d. Which courses have been helpful?

23e. In what way have these courses been helpful?

FOR ALL RESPONDENTS

24. Are there some courses that you wish you had OR had more of in high school, which you think might have helped you with regard to jobs?

Yes ______ No ______

IF NO: Go to Question 25 on next page.

IF YES:

24a. What kinds of courses?

24b. How would they have been helpful to you with regard to jobs?

FOR ALL RESPONDENTS

25. In high school are there any other experiences which you think can help people to get a job? (IF NECESSARY: Things like clubs, activities, or helping a teacher or counselor.)

Yes ______ No ______

IF NO: Terminate interview. SEE BOTTOM OF PAGE.

IF YES: 25a. Would you look at this card and tell me what kinds of experiences? (INTERVIEWER: Give R Card 6 and check all mentioned.)

____ a. Clubs at school
____ b. Activities such as plays, sports, etc.
____ c. Helping a teacher
____ d. Helping a counselor
____ e. Helping in the office
____ f. Social activities
____ g. Co-op Programs
____ h. Work Experience Programs
____ i. Job Upgrading Programs
____ j. Other (list):

25b. In what ways do you think these are helpful?

25c. Have any such things been of any help to you in getting and keeping a job?

Yes ______ No ______

INTERVIEWER: Terminate Interview.

INTERVIEWER: Please indicate if R was white ______, Negro ______,

Other ______

35. Respondent's Comments:

36. Interviewer's Comments:

APPENDIX D

DISTRIBUTION OF STANDARD INDUSTRIAL CLASSIFICATION CODES INTO RESEARCH CATEGORIES

Distribution of Standard Industrial Classification Codes into Research Categories

Research Category	SIC	Standard Industrial Classification Title
I. Construction and Manufacturing, Durable	15.	Building construction--general contractors
	16.	Construction other than building construction--general contractors
	17.	Construction--special trade contractors
	19.	Ordinance and accessories
	24.	Lumber and wood products, except furniture
	25.	Furniture and fixtures
	32.	Stone, clay, and glass products
	33.	Primary metal industries
	34.	Fabricated metal products, except ordinance, machinery and transportation equipment
	35.	Machinery, except electrical
	36.	Electrical machinery, equipment and supplies
	37.	Transportation equipment
	38.	Professional, scientific and controlling instruments; photographic and optical goods; watches and clocks
	39.	Miscellaneous manufacturing industries
	10.	Metal mining
II. Manufacturing Non-Durable	20.	Food and kindred products
	21.	Tobacco manufacturers
	22.	Textile mill products
	23.	Apparel and other finished products made from fabrics and similar materials
	26.	Paper and allied products
	27.	Printing, publishing and allied industries
	28.	Chemicals and allied products

Research Category		SIC	Standard Industrial Classification Title
II. Manufacturing Non-Durable (continued)		29.	Petroleum refining and related industries
		30.	Rubber and miscellaneous plastics products
		31.	Leather and leather products
		01.	Commercial farms
		02.	Non-commercial farms
		08.	Forestry
		09.	Fisheries
		11.	Anthracite mining
		12.	Bituminous coal and lignite mining
		13.	Crude petroleum and natural gas
		14.	Mining and quarrying of non-metallic minerals, except fuels
III. Warehouse and Wholesale		50.	Wholesale trade
IV. Retail		52.	R.T.--building materials, hardware and farm equipment
		53.	R.T.--general merchandise
		54.	R.T.--food
		55.	Automotive dealers and gasoline service stations
		56.	R.T.--apparel and accessories
		57.	R.T.--furniture, home furnishings and equipment
		58.	R.T.--eating and drinking places
		59.	R.T.--miscellaneous retail stores
	(UCB)		
V. Finance, Insurance, Real Estate	710	60.	Banking
	711	61.	Credit agencies other than banks
	713	62.	Security and commodity brokers, dealers, exchanges and services
	714	63.	Insurance carriers
		64.	Insurance agents, brokers, and service
		65.	Real estate
		66.	Combinations of real estate, insurance, law office
	712	67.	Holding and other investment companies

Research Category		SIC	Standard Industrial Classification Title
VI. Business and Personal Services		07.	Agricultural services and hunting and trapping
	(UCB) 720	40.	Railroad transportation
		41.	Local and suburban transit and interurban passenger transportation
		42.	Motor freight transportation and warehousing
		44.	Water transportation
		45.	Transportation by air
		46.	Pipe line transportation
		47.	Transportation services
		48.	Communication
		49.	Electric, gas, and sanitary services
		70.	Hotels, rooming houses, camps and other lodging places
		72.	Personal services
		73.	Miscellaneous business services
		75.	Auto repair, auto services, and garages
		76.	Miscellaneous repair services
		88.	Private households
VII. Nonprofit		84.	Museums, art galleries, botanical and zoological gardens
		86.	Nonprofit membership organizations
		91.	Federal government
		92.	State government
		93.	Local government
		94.	International government
VIII. Entertainment and Professional Services		78.	Motion pictures
		79.	Amusement and recreation services, except motion pictures
		80.	Medical and other health services
		81.	Legal services
		82.	Educational services
		89.	Miscellaneous services

APPENDIX E

PROCEDURES FOR COMPUTING SAMPLING ERRORS

Procedures for Computing Sampling Errors

Because much of the data under study were of nominal or classification type and were amenable to analyses designed for the study of dichotomous populations, the data were treated in this fashion for the purpose of estimating of sampling errors. Dichotomous data exist when there is one category of elements *displaying* the characteristic under study, and a category composed of those elements *not possessing* the characteristic.

Pursuing a conservative course of action in determining the amount of sampling error present with a sample size previously determined, it was assumed that the population was evenly divided relative to having or not having the particular attribute studied at a given time. The assumption of a "50-50" distribution of the presence and absence of the characteristic under study provides the condition of highest variability that can exist in a dichotomous population and thus provides the largest amount of sampling error present in a situation such as this. It follows from this that if the population were dichotomously divided in any other manner, the sampling error present would be less. Using the sample size previously determined and the value of Z, the normal deviate associated with the central 95 percent of the area under a normal curve, a series of 95 percent confidence intervals were established for the data collected.

Employers' Procedures

The following formulas were used for estimating the sampling error with the employers sample.[1]

---

[1] Siegel, *op. cit.*, pp. 403-405, 163-165, 149-151.

$d = Z \sigma_p$

d = Amount of error

$Z = \pm 1.96$ are the values of Z between which the central 95 percent of the cases composing the normal distribution occur.

σ_p = Standard error of sample arrived at by the following formula:

$\sigma_p = \sqrt{\sigma_p^2}$ where

$\sigma_p^2 = \sum_{i=1}^{5} w_i^2 \, o_i^2$

σ_p^2 = Variance

w_i = Relative weights of master sample to population.

The w_i's are:

$$\begin{aligned} w_i = w_1 &= 21{,}560/35{,}791 = .6024 \\ w_2 &= 9{,}760/35{,}791 = .2727 \\ w_3 &= 2{,}900/35{,}791 = .0810 \\ w_4 &= 1{,}400/35{,}791 = .0402 \\ w_5 &= 131/35{,}791 = \underline{.0037} \\ & \qquad\qquad\qquad\quad 1.0000 \end{aligned}$$

σ_i^2 = Variance of a sample stratum, the value of which is derived by the following formula:

$$\sigma_i^2 = \frac{P_u Q_u}{n_i} = \frac{(.5)\,(.5)}{n_i} = \frac{.25}{n_i}$$

P_u = Percent in "u" population that have attribute (assumed to be .50 for a most conservative estimate).

$Q_u = 1 - P_u = 0.50$

n_i = Number in sample from each sample stratum.

Using the confidence level of 95 percent and the conservative condition of an assumed $P = .5$ and $Q = .5$, the various values of acceptable error for the strata distributed over a dichotomous population are:

TABLE 1

Employers' Sampling Error

Size Strata	n_i	Error (d)
1- 3	138	.0834
4- 24	133	.0849
25- 99	129	.0862
100-499	65	.1215
500 +	107	.0947
Total	572	.0559

The error values are for Phase 3 where the fewest elements (number of completed interviews) were available. Therefore, in Phases 1 and 2 where the number of elements were larger, the sampling error is less than what is shown in Table 1.

School Leavers' Procedures

The same general procedures were followed for estimating the sampling error for the school leavers. The formula which was utilized to develop the sampling error is:

$$d = Z \sqrt{\frac{P_u\ Q_u}{n}}$$

d = Amount of error

Z = $\pm$ 1.96 the two values of Z between which the central 95 percent of the cases composing the distribution occur.

P_u = Percent in population that have attribute (assumed to be 0.5 for this is a most conservative estimate).

Q_u = Percent in population that do not have attribute (assumed to be 0.5 since $P_u + Q_u = 1$).

n = Sample size

In using the formula the sampling errors shown in Table II were compiled:

TABLE II

School Leaver Sample Error

Phase	n_i	Error (d)
1	160	± .0775
2	138	± .0935
3	124	± .0996
Total	422	± .0477

APPENDIX F

DATA COLLECTION PROCEDURES

Data Collection Procedures

Design of the Survey Questionnaires

The following is a statement of the procedures utilized in the development and design both of the employers' and school leavers' questionnaires.

1. The research staff prepared several drafts of the two questionnaires.
2. Drafts of these questionnaires were submitted to the following groups for their suggestions and revisions:
   a. Committee of Principal Advisers
   b. Panel of Research Advisers
   c. Panel of cooperating agencies.
3. These questionnaires were field tested and revised.
4. The revised questionnaires were again field tested and presented to our Committee of Principal Advisers for additional ideas and suggestions.
5. These questionnaires were used in Phase 1 and were modified only slightly for the form necessary in the second and third phases.

Preparation for Interviewing Intervals

Prior to each interview interval specific procedures were utilized to prepare the employer and school leaver for the survey. The following procedures were utilized:

A. Employers

1. Letters introducing the survey with the envelopes stamped "DO NOT FORWARD" were mailed to the employers approximately three weeks before interviewing was scheduled to begin. During Phases 2 and 3 the letters were addressed directly to the respondent who had answered in the previous interview interval.
2. The "DO NOT FORWARD" letters that were returned to the office were processed in an attempt to trace the new location of the company.

3. The face sheets of the employers' questionnaires were partially filled out in order to assist the interviewers in completing the interview.

B. School Leavers

1. The lists of the school leavers were checked and an interview number was assigned to each school leaver.

2. Transcripts for these school leavers were obtained from the Board of Education (transcripts were only available for graduates; for dropouts, it was necessary to make trips to each of the 21 Detroit senior high schools).

3. The necessary information to locate a school leaver was recorded, from information listed on the school leaver's high school transcript, on the face page of the questionnaire.

4. Letters with the envelope stamped "DO NOT FORWARD" were sent to the last known address of the school leaver approximately one month before interviewing.

The letters introduced the potential respondents to the purposes of the study. The main purpose of the letter, however, was to ascertain whether the respondent was still residing at the address given in the school leaver's high school transcript. For those individuals who had moved, we used the following procedures:

a. The same letter was sent by certified mail with "RETURN RECEIPT REQUESTED."[1]

b. A local credit bureau was utilized for those persons which were not located by certified mail.

c. In some cases addresses were ascertained by using the Detroit telephone directory.

There were a small number of school leavers who could not be located by any of these methods. These school leavers were considered as noninterviews and not as nonsample.

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[1] This method produced the greatest success.

Training of Field Personnel

Interviewing personnel for the survey were obtained from the files of the Wayne State University Urban Research Laboratory. The following steps were utilized in preparing the interviewers to obtain complete and accurate data:

1. Literature explaining the purposes and aims of the study were mailed to the interviewers.
2. A full day was devoted to a training session. The interviewers were given orientation on the project and the two questionnaires (school leavers and employers) were thoroughly discussed.
3. Each interviewer was given questionnaires which they were to complete and bring back within three days. These questionnaires were checked over by the research staff and any questions that remained were dealt with.
4. The interviewers were then allowed to complete their assigned interviews.

Sorting and Classification of Data

In each phase the following procedures were followed in order to insure the correctness of coding of the data:

1. Professional coders were used.
2. The coders were trained by the research assistant. In the training sessions the mechanics of the codes were explained as well as explaining any possible areas of difficulty.
3. The interviews were coded and checked. Any discrepancies were settled by the research assistant or the project director.

APPENDIX G

NUMBER OF ENTRY JOBS FILLED

TABLE I

Number of Entry Jobs Filled by Size of Company for Each Interview Phase

Size of Company Number of Employees	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1- 3	19,680	16	4,200	12	2,280	8	26,160	14
4- 24	26,760	22	8,400	24	4,680	16	39,840	21
25- 99	28,240	23	5,620	16	5,240	18	39,100	21
100-499	27,640	23	7,540	21	8,440	28	43,620	24
500 +	19,281	16	9,375	27	8,871	30	37,527	20
Aggregate	121,601	100	35,135	100	29,511	100	186,247	100

TABLE II

Number of Entry Jobs Filled by Type of Dictionary of Occupational Title Classification for Each Interview Phase

Dictionary of Occupational Titles (by Major Classification)	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Professional and Managerial	714	1	324	1	32	0	1,070	0
Clerical and Kindred	56,208	46	15,446	44	10,003	34	81,657	44
Sales and Kindred	12,632	10	2,424	7	2,796	10	17,852	10
Service	20,850	17	3,954	11	3,931	13	28,735	15
Agriculture, Fishery, Forestry	1,003	1	425	1	20	0	1,448	1
Skilled	3,377	3	1,367	4	644	2	5,388	3
Semi-skilled	9,657	8	3,557	10	3,446	12	16,660	9
Unskilled	17,160	14	7,638	22	8,639	29	33,437	18
Totals	121,601	100	35,135	100	29,511	100	186,247	100

TABLE III

Number of Entry Jobs Filled by Type of Company for Each Interview Phase

Standard Industrial Classification	Phase 1		Phase 2		Phase 3		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Construction and Manufacturing Durable	10,885	9	4,511	13	4,603	16	19,999	11
Manufacturing Non-Durable	3,153	3	1,371	4	2,667	9	7,191	4
Wholesale and Warehouse Trade	8,460	7	2,000	6	1,180	4	11,640	6
Retail Trade	34,541	28	14,488	41	9,489	32	58,518	31
Financial, Real Estate, and Insurance	24,275	20	4,877	14	3,749	13	32,901	18
Business and Personal Services	23,847	20	5,041	14	5,520	19	34,408	19
Non-Profit	6,173	5	874	2	1,020	3	8,067	4
Entertainment and Professional Services	10,267	8	1,973	6	1,283	4	13,523	7
Totals	121,601	100	35,135	100	29,511	100	186,247	100

TABLE IV

Number of Office and Retail Entry Jobs and Other Entry Jobs Filled by
Type of Company for Each Interview Phase

Standard Industrial Classification	Phase 1		Phase 2		Phase 3	
	Office/Retail	Other	Office/Retail	Other	Office/Retail	Other
Construction and Manufacturing Durable	2,791	8,094	382	4,129	373	4,230
Manufacturing Non-Durable	672	2,481	339	1,032	351	2,316
Wholesale Trade	4,220	4,240	300	1,700	740	440
Retail Trade	16,207	18,334	8,523	5,965	4,509	4,980
Finance, Real Estate, and Insurance	24,100	175	4,863	14	3,743	6
Business Services	10,957	12,890	1,676	3,365	1,532	3,988
Non-Profit	4,420	1,755	680	194	840	180
Professional and Entertainment Services	5,433	4,834	1,107	866	711	572
Total	68,800	52,803	17,870	17,265	12,799	16,712

APPENDIX H

ENTRY JOB SKILL REQUIREMENTS

TABLE I

Bookkeepers and Cashiers (Except Bank Cashiers)
DOT 101

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=2563)
One or More	2,563	39	Typewriting	1	1,301	51
None	3,982	61	Business Machines	2	996	39
Total	6,545	100	Bookkeeping and Accounting	3	669	26
			Filing	4	280	11
			Retailing	5	80	3
			Data Processing	6	4	0
			Totals		3,330	130

TABLE II

Bookkeeping Machine Operators
DOT 102

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=310)
One or More	310	48	Typewriting	1	269	87
None	342	52	Business Machines	2	219	71
Total	652	100	Bookkeeping and Accounting	3	80	26
			Total		568	184

TABLE III

Checkers
DOT 103

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent
One or More	21	4	Typewriting	1	20	95
None	480	96	Bookkeeping and Accounting	2	1	5
Total	501	100	Total		21	100

TABLE IV

Clerks, General and General Office
DOT 104,105

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=15,278)
One or More	15,278	69	Typewriting	1	14,621	96
None	6,788	31	Bookkeeping and Accounting	2	2,218	14
Total	22,066	100	Business Machines	3	2,108	13
			Shorthand	4	1,530	10
			Office Practice	5	490	3
			Filing	6	433	3
			Business English	7	120	1
			Business Mathematics	8	100	1
			General Business	9	28	-
			Subtotal		21,648	1.41
			No Answer		132	1
			Total		21,780	1.42

TABLE V

Financial Institution Clerks, n.e.c.
DOT 106

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=407)
One or More	407	40	Business Machines	1	236	58
None	612	60	Typewriting	2	231	57
Total	1,019	100	Office Practice	3	90	22
			Subtotal		557	1.37
			No Answer		51	12
			Total		608	1.49

TABLE VI

Hotel Clerks, n.e.c.; Insurance Clerks, n.e.c.; Clerks in Trade, n.e.c.; Correspondence Clerks, n.e.c.
DOT 107, 108, 112, 116

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent
One or More	394	22	Typewriting	1	260	66
None	1,356	78	Office Practice	2	120	30
Total	1,750	100	Business Mathematics	3	20	5
			Filing	4	14	4
			Total		414	105

TABLE VII

File Clerks
DOT 117

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=2,209)
One or More	2,209	32	Typewriting	1	1,480	67
None	4,692	68	General Business	2	600	27
Total	6,901	100	Filing	3	190	9
			Business Machines	4	124	6
			Office Practice	5	20	1
			Sub Total		2,414	110
			No Answer		4	-
			Total		2,418	110

TABLE VIII

General Industry Clerks
DOT 118

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=2,198)
One or More	2,198	41	Typewriting	1	1,910	87
None	3,145	59	Business Machines	2	450	20
Total	5,343	100	Office Practice	3	60	3
			Business Mathematics	4	28	1
			Filing	5	20	1
			Total		2,468	112

TABLE IX

Messengers, Errand Boys, and Office Boys and Girls; Telegraph Messengers
DOT 123,124

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=2,433)
One Or More	2,433	39	General Business	1	2,000	82
None	3,772	61	Typewriting	2	432	18
Total	6,205	100	Shorthand	3	90	4
			Business Machines	4	1	0
			Sub Total		2,523	104
			No Answer		1	-
			Total		2,524	104

TABLE X

Office Machine Operators
DOT 125

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=721)
One or More	721	80	Data Processing	1	371	51
None	184	20	Typewriting	2	335	46
Total	905	100	Business Machines	3	113	16
			Bookkeeping and Accounting	4	24	3
			Sub Total		843	116
			No Answer		4	1
			Total		847	117

TABLE XI

Paymasters, Payroll Clerks and Timekeepers
DOT 126

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=127)
One or More	127	61	Business Machines	1	66	52
None	81	39	Typewriting	2	61	48
Total	208	100	Bookkeeping and Accounting	3	1	1
			Total		128	101

TABLE XII

Post Office Clerks; Mail Carriers
DOT 127,128

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=36)
One or More	36	2	Business Machines	1	26	72
None	1,644	98	Typewriting	2	10	28
Total	1,680	100	Data Processing	3	10	28
			Total		46	128

TABLE XIII

Physicians' and Dentists' Assistants and Attendants
DOT 132

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent
One or More	120	33	Typewriting	1	120	100
None	240	67	Total		120	100
Total	360	100				

TABLE XIV

Secretaries, Stenographers
DOT 133,137

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=4,752)
One or More	4,752	100	Typewriting	1	4,719	99
None	-	-	Shorthand	2	4,552	96
Total	4,752	100	Business Machines	3	38	1
			Total		9,307	196

TABLE XV

Shipping and Receiving Clerks; Stock Clerks
DOT 134,138

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=122)
One or More	122	4	Typewriting	1	62	51
None	2,856	96	Business Mathematics	2	40	33
Total	2,978	100	Office Practice	3	20	16
			Total		122	100

TABLE XVI

Typists
DOT 137

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=16,507)
One or More	16,507	99	Typewriting	1	16,420	99
None	201	1	Business Mathematics	2	1,200	7
Total	16,708	100	Business Machines	3	675	4
			Office Practice	4	286	2
			Filing	5	228	1
			Bookkeeping and Accounting	6	200	1
			Total		19,009	114

TABLE XVII

Telephone Operators
DOT 142

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=941)
One or More	941	32	Typewriting	1	900	96
None	1,974	68	Business Machines	2	40	4
Total	2,915	100	Office Practice	3	21	2
			Filing	4	20	2
			Total		981	104

TABLE XVIII

Technical Clerks, n.e.c.; Statistical Clerks and Compilers; Agents and Appraisers, n.e.c.; Clerks and Kindred Occupations
DOT 135,136,148,149

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent
One or More	19	11	Bookkeeping and Accounting	1	18	95
None	150	89	Business Machines	2	18	95
Total	169	100	Typewriting	3	1	5
			Shorthand	4	1	5
			Total		38	200

TABLE XIX

Canvassers and Solicitors
DOT 155

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=1,025)
One or More	1,025	100	Office Practice	1	840	82
None	-	-	Typewriting	2	185	18
Total	1,025	100	Retailing	3	5	1
			Total		1,030	101

TABLE XX

Salesmen, Insurance; Salesmen, Real Estate
DOT 157,163

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=20)
One or More	20	2	Business English	1	20	100
None	1,322	98	Total		20	100
Total	1,342	100				

TABLE XXI

Sales Clerks; Sales Clerks, Dry Cleaning and Laundry
DOT 170,196

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=540)
One or More	540	7	Business Machines	1	540	100
None	7,431	93	Business Mathematics	2	120	22
Total	7,971	100	Total		660	122

TABLE XXII

Salespersons; Salesmen, to Consumers;
Salesmen and Sales Agents except to Consumers; Shoppers
DOT 175,180,185,197

Entry Job Skill Requirements

Skills Required	Number	Percent	Skills Specified	Rank	Number	Percent (N=660)
One or More	660	9	Business Machines	2	240	36
None	6,854	91	Typewriting	2	240	36
Total	7,514	100	Shorthand	2	240	36
			Retailing	4	180	27
			Total		900	135